

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

{ STAMPED . . . SIXPENCE.
{ UNSTAMPED . . FIVEPENCE.

several years, its superior quality has been generally acknowledged, and has not hesitatingly affirmed.

EAST WHEEL RUSSELL. ALFRED CONSOLS.	EAST ALFRED. YARNER.
--	-------------------------

SPECIAL REPORTS on the above MINES, by eminent practical authorities, will appear in Mr. MURCHISON'S REVIEW, now ready, price One Shilling, at 117, Bishopsgate-street Within, London.

inclined to think the landlord's observation a very sarcastic, but very correct remark.

Leaving this place, we visited the TANVORICK SLATE QUARRIES, now unwrought, from which vast quantities have been removed; they are only worth visiting for the sake of geological investigation and instruction. A large well-defined elvan may be seen in these quarries, cut down to a smooth face, like the edge of the slope the workers left. The slate is not of good quality, and carriage to port too heavy for beneficial working. After taking leave of our friend, we took a careful survey of the parish of St. Merryn, through which this elvan runs. The northern part of it is all covered with minute lead and copper, particularly at Trevone Head and Peris Head. Directly west of Trevone and Peris are the hills of the north and south lead lode, running from it to Polmarth. In many places in this parish the elvan occasionally been turned up by the plough, but hitherto it has been wholly neglected as mining property, though a hasty glance convinced us that there is much to be done, particularly in the northern cliffs, where lead lodes may be seen in many places, associated with blende and mundic. We also found barytes of good colour, but not in quantity sufficient for working. A more rigid examination might be attended by better results. By the way, if all persons are to be judged on such a liberal scale as the wisecracker who awarded Prof. Ansted four guineas for three days' work and travelling expenses to the Mendip Hills, the public may traverse these cliffs, and grovel in the shavings, and be entitled to a guinea. The result of our labour on the hillside, foot, exposed ourselves to danger often, and given the results, our labour to the public, at no cost whatever to it. After years of hard work and trouble, and expense, I am disgraced to have the profession (of which we have the honour to be humble members) treated in such a manner by an individual who, silly as he has proved himself, ought to have known better. Fortunately for us, and fortunately for him, one fool does not disturb our equanimity; we, therefore, pass the animal heedlessly by, supposing it only an ass in a lion's skin. We resume our observations of St. Merryn by stating that a beach and blown sand, called Towans, may be seen at Constantine Bay, to the south-west of Trevone Head. The sand has buried the church of St. Constantine, and the tower of the castle. On the shore, inside a rock called Constantine's Island, a raised beach may be found, in some places similar to those seen at St. Ives Head, Cape Cornwall, Coverack, Gerran Vean, Palsnoe, and other places, and the line of coast, evidence of a rise of many feet, the land, we are told, is sinking.

was entirely and exclusively upon family considerations. They had heard of the perils, too, he had encountered, and having a large family, they were desirous that he should get into more quiet regions. He had been twice attacked by banditti; on the last occasion with his wife and daughters. Major Farrell had always been most anxious to do all he could for the concern, and he was sure the proprietors would meet him in England with the very best of feeling. With regard to Mr. Fisherbert's accounts being meagre, he must remind them that, at the time alluded to, he had the entire management of the mine, and his time was so much occupied, that they could not expect very full and lengthened correspondence. He (the Chairman) had no reason to doubt but that the directors would be able to give him the necessary details, and that he would be able to give them the hints given, and send out instructions to that effect. With respect to his own retirement, he had asked his colleagues whether the concern was in such a position that he could leave it; but they were of opinion he could not do so at the present time.

Mr. PHILLIPS said he had one or two remarks to make upon the mining part of the concern. With respect to the mine of La Trinidad, Mr. Williamson might set his mind at rest that they did not intend to give it up. The position of the mine was such as to make it a very valuable part of the property of the United Mexican Mining Company. They had been told that the mine was worth 12,000*l*.; but he thought that the mine was worth 10,000*l*., whilst it was estimated at 12,000*l*.; therefore, for once the miner was within the estimate, but they had gone down in extraordinary favourable ground. Mr. Phillips explained at some length, from a plan he had drawn, the exact position of the present working, from which it appeared they had 10 or 12 varas to cut the vein in the perpendicular shaft, which would effect a great saving, instead of raising the ore through the cross-cut. In Dolores, they had also a most valuable piece of ground. He considered the directors might congratulate the shareholders on the present position of their property. The only reservation he had was with respect to the mine of La Trinidad, but he did not believe there could possibly have been an end to the association.—The report was then unanimously received and adopted.

A vote of thanks to the Chairman terminated the proceedings.

UNITED MEXICAN MINING ASSOCIATION.

DUN MOUNTAIN COPPER MINING COMPANY.

8 with squabbling, and that the Burra Burra had 39 miles to carry their ore
9 and enquired the distance they would have to carry theirs.
10 The CHAIRMAN said, that when the railroad was finished their distance would be
11 about 14 miles. He then read some extracts from a private letter, as confirmatory
12 of the opinion which he had ever held with regard to the mine; in this it was stated
13 that there was no reason to doubt but that the shareholders would be repaid for
14 their outlay, but that no ore could be shipped until the road was finished.
15 After some observations upon the exceedingly satisfactory manner in which the di-
16 rectors carried on the company's business, and the advantage derived from the har-
17 mony which existed between them, a SHAREHOLDER enquired whether the £6000, in
18 circulation, was not the property of the shareholders?
19 The CHAIRMAN: It does. There has been sent out everything required, including
20 all the rails, for making about 10 miles of railroad. Trucks were also sent with ad-
21 ditional wheels and axles, so that Mr. Hacket might get others of a rougher sort
22 made out there.
23 A SHAREHOLDER: The estimate for making the road would be 3000*l.*, and the dif-
24 ference between 6*l.* and 10*l.* per day in the value of labour?
25 The CHAIRMAN: Yes; precisely so. As the labour is dearer now we had better say
26 5000*l.*, which I should think would be sufficient.
27 The report and accounts were then unanimously adopted, and the Chairman pro-
28 posed a special resolution, that all the directors be reduced from seven to six,
29 and also be re-elected. The vote of 249*l.* to the colonial committee was confirmed,
30 and the retiring directors and auditors unanimously re-elected. A vote of thanks to
31 the Chairman and directors terminated the proceedings.

desire to insist that that, from family reasons, Major Farrell would leave their jurisdiction. The directors of the company, however, were in a quandary. It was proposed to appoint Mr. Pitscherbert, at a salary of \$1000 a year, instead of \$1200, the amount now paid to Major Farrell. The directors had also consulted Mr. Farrell in reference to the appointment of an assistant commissioner, and had given him the necessary authority to do so if he could find, in Mexico, the party whom it was considered desirable. He (the chairman) would now be glad to answer any questions that might be asked by the shareholders. He would also be glad to answer the holders. The secretary had just reminded him that the extraction for the week, according to the last statement, was 1000 carcas, and when they got down to the depot proposed would be doubled, or equal to \$2500 worth of ore per week.

Mr. WILLIAMSON said he had come prepared to see the company in a very prosperous condition, and that he was disappointed to find it in the position in which it was now.

The CHAIRMAN replied that such was the fact. According to the last advice, the 5632½ had been reduced some 7000, or 8000, out of the profits. Mr. Bland could not borrow is, beyond the value of the property in the colonies.

Mr. RICHARDSON said he had heard from a friend that the property in Melbourne was likely to be worth 20,000.

He had to resign to retirement of Major Farrell was bitter, and he said that he regretted it. He pointed he wished to know was whether it was only from family reasons that he resigned? The second bitter to which he would allude was, when they received orders to divide, they should lose the services of their excellent Chairman; but he sincerely hoped a dividend would wnet his appetite to keep with them. (Hear.) As to the engine as to the result of the association, and he had always been extremely sanguine as to the result of the association, and he thought it would come down, although he had six months ago. In February it was expected they would come down to the required depth, when they would produce 2000 cargas per week, or gross earning of 100,000, a year, and he thought upon the next occasion they might declare a dividend of 7s. 6d. per share. (Hear.) As to the mine of La Trinidad, he thought it was very good, and he thought it was very good. He must remind them that when they last met together, there were 5000, or more, tons of coal in the mine, and they up. (Cheers.) He had a few hard words to say against Mr. Phillips at the last meeting, but they had gone down quicker than expected, and extracted the ore at less expense. The only difference upon that occasion in his (Mr. Williamson's) mind was whether they would have sufficient capital to go on, as he never objected to the mining, which had now proved so successful. With regard to Major Farrell's opinion upon the matter, it was very good, and he thought it was very good. Fitzherbert might be an able miner, but the question was whether he could conduct the correspondence properly, as he remembered, when Major Farrell was in the country, Mr. Fitzherbert took the temporary command, and his reports were very meagre. His friends, as they were at such a distance, the board would send out instructions, that they might have the whole of the facts, as it was exceedingly important that they should have full reports, and Major Farrell had always sent exact reports.

pose of the property without the consent of the directors, as it would be necessary to have the seal of the company affixed to make a good title.

A SHAREHOLDER considered they had better wind up at once.

The CHAIRMAN said he should be happy to do so, if it was the wish of the meeting. Perhaps the proprietor would submit a resolution to that effect?—The amendment was then put and lost, and the motion for receiving the report carried.

Mr. SURRO next proposed that a committee of investigation be appointed, with power to call in an accountant to assist them. There had been a large proportion of the capital lost, and the object in view was to ascertain the past and present position of the company, and its future prospects.—Mr. CLAY seconded the resolution.

The CHAIRMAN opposed the motion, upon the ground that in a few months they could be in possession of information that would enable them to determine whether the company should be wound-up in toto. The money was lost, and could not be got again. As three directors intended to retire, it would be far preferable to elect others than appoint a committee of investigation.

The resolution was then put to the ballot, when the number of shares in favour of it were 3145; against, 14,645. Shareholders voting for the committee, 14; against, 11.

Mr. RICHARDSON, in a speech of a very personal character, proposed a vote of confidence in Mr. POWLES, and that he be requested to resign his seat.—Mr. SURRO seconded the resolution.

Mr. POWLES having explained, the resolution was then put to the meeting, and declared lost.

The meeting was then made special, and a resolution carried that the number of directors be reduced to five.

THE MARIQUITA AND NEW GRANADA MINING COMPANY.

The half-yearly meeting of proprietors was held at the London Tavern, yesterday, Mr. J. D. POWLES in the chair.

Mr. JONES (the secretary) read the notice convening the meeting.

Mr. RICHARDSON having delivered in a protest against Mr. POWLES filling the chair, on the ground that he was disqualified, upon the ground that in a few months they could be in possession of information that would enable them to determine whether the company should be wound-up in toto. The money was lost, and could not be got again. As three directors intended to retire, it would be far preferable to elect others than appoint a committee of investigation.

The CHAIRMAN said, notwithstanding the opinion of the solicitor, he would retire immediately if he considered it would benefit the company, but he held largely himself, and many of his friends were deeply interested. The personal hostility of the party was so well known that it was unnecessary for him to make any remarks on the subject.

Mr. MAPLES stated that a former Act of Parliament disqualified a party from being a director who was either bankrupt, insolvent, or compounded with his creditors; but this had been repealed, and, under the present law, only bankrupts and insolvents were disqualified.

The CHAIRMAN said they would now proceed to the business of the meeting. In July last it was stated by the superintendent at Santa Ana that they would make a profit of \$11,000 per month, and, with respect to that establishment, everything was going on satisfactorily. They had engaged seven Cornish miners, and by increasing the European force they were less dependent upon the natives, who became more manageable. He had directed attention to the superintendent to be always looking ahead, that they might be opening at one or two points, in case of any portion of their property failing. With regard to the profit at Santa Ana, in the seven months it amounted to \$77,693 3 50. Purima, eight months, \$6271 5 75. Marmato, seven months, a loss of \$1151. The financial state at the mines was, according to the last advices, highly satisfactory. At Bogota they had in the mint \$48,141; at Santa Ana, \$15,363; at Marmato, \$13,223; at Purima, \$6560; making together, \$93,377 in favour of the company. The superintendent had expended a large amount in dressing machinery, and if they had a good supply of water it was expected the returns would not fail off, as the general quality of mineral was fully equal to what they had been getting. At Candeo Quebrada they had erected two mills, as at that spot they had a large amount of mineral washed down from the mountains, and which required no mining, as it was merely to take it out of the ravine; and from that work and the mines the directors expected it would give a return of about \$5000 per month. With regard to the financial position in London, they had at the bankers \$1700, and up to the end of April they expected the total amount would be \$18,650.

It was proposed to declare a dividend of 1s. per share, which would require \$5000, out of the \$1700, in the banker's hands.

The CHAIRMAN having submitted a resolution for a dividend of 1s. per share, Mr. FATHERLY, jun., proposed an amendment that it be 6d.—Mr. FATHERLY, sen., seconded the amendment, when a lengthened discussion ensued, a large majority being in favour of the dividend of 1s.

Mr. DE PASSE considered it would be of great advantage to have the company brought under limited liability; and, as a large holder, he would rather forego the dividend of 1s. at the present time, in order that their responsibility might be limited. He considered the company was in such a favourable position at the present time that they ought to adopt the course he had proposed.

Mr. SPENCER HERAPATH considered they had better leave the question of limited liability in the hands of the directors, as at the moment they limited the company they took away the means of obtaining credit.

Mr. MAPLES said there would be some difficulty in registering the company, as the only method would be to dissolve the present and re-form it.

The resolution proposing the dividend of 1s. payable on Feb. 10, was then carried. Mr. JOHN FIELD then proposed a resolution, that a committee of shareholders should be appointed to confer with the directors as to whether it was desirable to remodel the company with limited liability.

The CHAIRMAN said the directors were of one mind—that if possible they should re-form the company with limited liability.

Mr. JOHN FIELD then proposed that a committee of shareholders should be elected, to confer with the directors as to registering the company with limited liability.

Mr. SPENCER HERAPATH seconded the resolution, and the following gentlemen were unanimously appointed:—Mr. John Field, Mr. Spencer Herapath, Mr. De Passe, and Mr. Yarrow.—The proceedings then terminated.

SORTRIDGE CONSOLS MINING COMPANY.

A quarterly general meeting of shareholders was held at the London Tavern, on Tuesday, Mr. W. A. THOMAS in the chair.

Mr. COHEN (the secretary) read the notice convening the meeting and the accounts (an abstract of which was given in last week's Journal): they were received and adopted, and the minutes of the last meeting confirmed.

Capt. James Richards' report, giving the fullest particulars of the different workings and prospects, was then read.

The CHAIRMAN said, as the accounts had been in the hands of the shareholders, if there were any matters on which they wished information he would be most willing to give every explanation in his power. From the profit shown of 4334. 1s. must be deducted the loss shown in the last quarterly account of 3671. 11s. 4d., so that the profit on the six months' working had been 1152. 9s. 8d. The last account included two months' or against three months' cost, and the present account four months' or against three months' cost. The samplings had been monthly, they were now bi-monthly, this being a considerable saving in the expenses. He did not like giving estimated sums, but thought they were pretty correct in those given. There was one feature in this mine which in many others, from the magnitude of the works, could not be carried out; he alluded to paying the labour cost within a fortnight after the expiration of the past month. Also, that merchants' bills which accrued in November were included in the December cost, thus bringing up all the charges to the closest possible time.

The agent's report having been adopted—

Mr. M. RICHARDS said, having been in the neighbourhood of the mine he had been informed that the reserves of ore were considerably more than given by Captain Richards, and believing that they had an excellent mine, and that the returns would continue the same, he would be to propose a dividend of 1s. 6d. per share.

The CHAIRMAN, in reply, said nothing could be more difficult to arrive at than the actual reserves of a mine. Capt. Richards' opinion was borne out by Capt. Clymo, who had inspected the mine and had his personal knowledge of the former thought they might put every confidence in his report. However careful an agent might be in his calculations, the ground might alter, which would carry them astray. An instance came to his own knowledge—a piece of ground of above 10 fms. in depth had a block of bad ground which came in between the ore which was in the level above, and extended to within 5 in. of the top of the level below, and the ground was estimated to turn out 3 tons of ore per fm.

It was then moved by Mr. RICHARDS, seconded by Mr. H. W. FETTS, that a dividend of 1s. 6d. per share be declared, payable on Feb. 20.

Mr. HALLETT observed that, as far as he was concerned, he would have preferred that the dividend should have been delayed so that they might have made a larger one at the next meeting.

Upon which the following amendment was proposed by Capt. TASCOTT, and seconded by Mr. McCallan:—"That as it appears there is not sufficient cash now in hand to pay the proposed dividend, it be not declared at this meeting." Upon a division, the amendment was lost; the original resolution, declaring the dividend, was then passed.

Mr. W. MICHELL would beg before the meeting separated to offer a few remarks, having been underground and inspected the mine. They had a very large and powerful cross-course, and it was his firm opinion that their main lode was farther north, and he should advise that Capt. Richards be requested to force on the works on that point.—The CHAIRMAN said the suggestion should be attended to.

The committee of management were re-elected, and a vote of thanks to them for past services, and to the Chairman, terminated the proceedings.

EAST MONA COPPER MINES COMPANY.

The first annual meeting of proprietors was held on Jan. 23, at the company's offices, in Liverpool, Mr. W. H. GAN in the chair.

The CHAIRMAN said it would be seen by the reports of Capt. Williams and of the purser that the proceedings of the year were highly satisfactory. A large quantity of mining ground had been opened up, the whole of which, including the principal work now in hand, promised most gratifying results. The report of Capt. Williams would speak for itself. It was, he thought, desirable to register the adventure under the Joint-Stock Companies Act, for a nominal capital of £2000, in 2500 shares, but he had strong hopes that the sum of 10s. per share, already subscribed, would be sufficient to enable the manager to obtain copper for the market, and render any further call unnecessary. The Chairman then submitted the reports, which were unanimously approved; and the meeting determined that the company should be registered.

Financial statement of the purser of the East Mona Copper Mining Company:—

Amount of capital subscribed on 2500 shares (10s. each)	£1250 0 0
Labour, wages, surveys, materials, machinery,	£683 5 2
&c., to date	200 0 0
Compensation to original grantees	365 14 10
Balance to credit	£1250 0 0

Mr. CHAFFER observed that it had long been the opinion of eminent miners and geologists that the neighbouring Mona and Parys Mines did not contain all the copper of the island; and, on the contrary, that the whole of the locality abounded in mineral wealth. In his opinion, the proceedings detailed in the report confirmed these views; and though the report of Capt. Williams warranted the expectation of the Chairman, that the funds in hand would suffice, he (Mr. Chaffer) was prepared to incur any expense that might be necessary to develop what he considered the valuable district comprised in the grant.

The committee of management were re-elected. A vote of thanks was given to the Chairman, and the meeting separated.

REPORT OF CAPT. WILLIAMS.

In obedience to the wishes of the company, I forward you my general report respecting these mines. They are situated a short distance from the town and Port of Amble, on the lands of Mr. Roberts, under a lease, for the liberal terms of 1-16th

royalty. The grant comprises about 120 acres of mineral land. I cannot better describe their position than by quoting from the report of Capt. Vivian, who surveyed them last May, when he states that he "considers their situation very good, being about two miles east in the direction of the celebrated Parys Mountain Mines (Mona and Parys Mines). The formation also is generally very similar to that; besides, there have been some workings on the east side, and immediately adjoining this, in a mine called Rhosmonach. I understand some hundreds of tons of ore were raised there." These statements I confirm, and have to inform you that a new company is being formed, who intend working these mines with renewed energy. Capt. Vivian further observed that in the east several mineralised courses, chiefly quartz, cropping out at different points, bearing on them spots of bluish-grey of copper, iron pyrites, lead, &c.; and, speaking of the place where I have since sunk Duncan's shaft, he adds, "There is one of these opened on at a little distance north of the water shaft, that looks more favourable than the others, and I think it would be well to give this some trial, which may be done by sinking a shaft perpendicularly about 20 yards north of the outcrop;" and he recommended that operation. I concurred in this opinion, and accordingly Duncan's shaft was sunk, under my superintendence, at the point indicated by Capt. Vivian. At the depth of 14 yards we caught the lode, which had dipped faster than I expected from its appearance at the outcrop. It had greatly improved, was about 3 ft. thick, and full of sulphuret of copper, blende, lead &c., extending east and west through the shaft, completely justifying the estimate which had been formed of it by Capt. Vivian and myself. As far as the lode can be traced, it stretches in a continuous body across the east for a considerable distance in the direction of the Mona and Parys Mines. The more we see of this lode the better it looks; after cutting it, we worked on it a few days, and every day it had a better appearance. It was then determined to continue the shaft vertically to a depth which would serve as the line of an adit level, for which the land is favourable. Accordingly I have sunk the shaft to the requisite depth; the work progresses satisfactorily, and I hope by the end of another two months we shall be raising some good copper ore for the market, as I have not the least doubt but that the lode will continue to improve. Rothwell's shaft, which Capt. Vivian also examined, and in which he reports that he found veins of copper, was considered by him a little too far north from the Rhosmonach lode, and he recommended the south level, which had been driven some distance, to be extended, especially on account of the vein found at the extreme end of that level, which he held as "probably indicative of there being other and stronger veins at no great distance." He also recommended that another vein, found crossing this shaft at 13 yards from the surface, and easy for driving, should also be driven on. I have not, however, commenced either of these operations, preferring at present to prosecute the works at Duncan's shaft with all the means at my command. At Rhosmonach, where I am convinced we have the lode which made the copper in Rhosmonach from 3 to 4 ft. wide, I have also, as yet, for the same reason done nothing further. All the works should undoubtedly be proceeded with as soon as the forward state of the drift from Duncan's shaft will admit. Without exciting any undue expectations, I feel warranted, by the general character of the ground, the confirmation of Capt. Vivian's and my own views respecting the lode at Duncan's shaft, and the good neighbourhood of the site, in expressing my strong conviction of the success of the undertaking.—JAMES M. WILLIAMS.

TREWETHA MINING COMPANY.

A meeting of shareholders was held at the offices, Threadneedle-street, on Tuesday, Mr. JOHN BALSTON in the chair.

Mr. DUNFORD (the secretary) read the notice convening the meeting, and the following report from Capt. Thos. Richards and Wm. Rowe:—

Jan. 23.—Since the last general meeting we have changed all the pitwork from the 50 to the bottom of the mine, and attached an additional boiler to the engine, the whole of which answers our fullest expectation. The engine-shaft has been sunk 5 fathoms, making the whole depth 9 fms. below the 70; in the latter 5 fms. the ground is of the most favourable description for the shaft, and we are confident that the lode, which we reached in the last level, will show a decided improvement. The 70, south from engine-shaft, has been extended 16 fms. 4 ft. 4 in.; this ground has been more or less productive, varying in value from 5s. to 3s. per fathom. The 70 north has been extended 11 fms.; throughout this drive the ground has been hard, and the lode, comparatively speaking, poor; the present end now appears to be changing for the better, and we expect an improvement, as the lode in the winze over this point and the 60 northward therefrom, for 15 fms. in length, is tolerably productive. The 60 north has been driven 21 fms. 3 ft. 6 in.; the former 10 fms. varied in value from 5s. to 2s. per fm. in the latter 5 fms. the lode has been more or less productive. The 50 has been extended northward 13 fms. 4 ft. 6 in.; no paying ground has yet been discovered, but this level should be continued with all possible speed towards the junction of the two lodes, about which there is a very fine eleven course, and altogether this may be considered a very promising piece of new ground. The steps now working are producing about 4s. worth of ore per fm. We recommend sinking the engine-shaft 12 fms. below the 70 before cross-cutting to the lode, as having such a favourable change in the character of the ground, we consider the chances of an improvement at that depth much greater.

The following statement of accounts was then read:—

Balance last audit	£ 291 12 11
Labour and wages, to Dec.	1093 15 7
Merchants' bills	1093 15 3
Royalty	59 0 5
Interest	18 19 3
Bill stamps and drafts	2 0 6
Calls received	640 5 0
Ore sold	1781 9 4
Property tax returned	6 4 3
Leaving balance against the mine	£1222 0 4
Less arrears of call	383 15 0
Total balance	£ 838 5 4

The CHAIRMAN said that the committee thought it advisable to sink to the 90 with out stowing, instead of driving ends, as in the 70th mine adjoining the lode had always failed from the 70 to the 90, and then become good. The Trevelyan was poor between those levels, and rich afterwards. They would, by the course proposed, get down sooner, and save expense.

Mr. DUNFORD explained that their 70 fm. level was really 73 fms., which left but 17 fms. to reach the 90; of this they had already sunk 9 fms., so that the real question was whether they should put out a cross-cut at 12 fms. below the 70, or sink an additional 5 fms., and drive at the 90. By this course, they would have 17 fms. of back instead of 12, and, presuming the lode to turn out well, it would be a great advantage.

Mr. ROWE required the expense of sinking, and the time it would take to do the work proposed.

Mr. DUNFORD said the present price for sinking was 21s. per fm., and the sinking would take about three months.

The report and accounts were then unanimously carried, a call of 5s. per share made, and a resolution passed for adjourning the meeting to Feb. 10, for the forfeiture of shares on which the calls to Sept. 23 remain unpaid.—The meeting then separated.

Mr. Crofts sends the following reflections on the state and prospects of the market:—The old joke about money being a drug, is no longer a joke but a reality. The most prevalent of observers in financial matters, and amongst them were, of course, those who thought it prudent to pay 9 and 10 per cent. upon eight months' bills on India, did not foresee that in an incredibly short space of time the nominal value of the commodity at the Bank of England would be 4 per cent., and its real value amongst bankers and capitalists only 2 per cent. And, as if this latter quotation was not low enough to mark the transition from one extreme to another, the most important of the joint-stock companies will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

As regards the particular market under discussion (the mining market), another advance, both in tin and copper, has occurred this week, and, coupled with the monetary events alluded to, has brought an unprecedented amount of business forward, the best feature of which, we are happy to say, without producing any marked danger of overdoing the joint-stock market, will set an example to all the others, and allow only 1 per cent. for deposits of sums under 500l. With them, therefore, for a large majority of depositors, the rate is rendered nil, by putting an end to deposits, and turning the current of capital into the funds and stocks of every description. Thus, each interest gets its turn in time, and lively markets in shares must inevitably ensue.

the improvement in the standard larger profits may be anticipated in future. Butlers have advanced from 250 to 300, buyers. Alfred Consols have advanced from 13 to 14½. 18. Talvack has been in fair demand at 6½ to 5½. Sortridge Consols at 28s. 3d. to 27s. 6d., with dividend. The propriety of declaring this dividend, seeing that the prospect of the mine are at present a little cloudy, has been a subject of much discussion. We hope, however, and fully believe, that when the levels are extended further west, something of importance will be met with there. It will be remembered that these shares were at one period selling at 7 to 7½; and the prospects in the 30 fully warranted the price, as will be seen by the quantity of ore that has been sold since the mine commenced, which, including carriage, amounts to 38,940. 9s., the principal part of which was raised above the 40, east of Hitchin's shaft, thus showing the richness of the lode for some 60 fms. in length in this part of the mine. We make these observations, as the question is sometimes asked why Sortridge Consols were ever 7½ per share? It is apparent to any one at all conversant with mining operations, that had the lode been as valuable in the 40 and 50, as in the 20 and 30, this mine would have been second only to Devon Great Consols in the whole district. St. Day United Mines have been largely dealt in at 19s. 6d. to 21s. per share, owing to the improvement in the lode in the 40, west of Singer's shaft; this, together with the advance in price of copper and tin, will tend to augment the monthly profits of these important mines. A dividend of 1s. will be declared at the coming meeting. Wheal Bassets have been in demand, with almost an absence of sellers. Kelly Brays fully maintain their late rise; the advance is warranted by the improved prospects of the mine. The discovery of the same shoot of ore in the 45 as is seen in the level above (the 35) has considerably enhanced the value of this property. Wheal Kiddy (St. Agnes), under the able local management of the new agent, is showing evident signs of again becoming a profitable concern. Great Hwas, but for the depressed state of the tin market during the past six months, would ere this have been working at a monthly profit. It reflects much credit on the management to find that a great deal of tin ground has been laid open and reserved, while at the same time the cost has nearly been met by the monthly sales. With the improved price of tin, this mine, we believe, will, for the future, be worked at a good profit, and is likely at no distant period to become a dividend property. Wheal Edwards have not been much dealt in; we have much pleasure in stating, however, that the mine is opening out splendidly; the south lode, at the shaft, is turning out 22 tons of good ore per fm., and still improving; every facility is afforded to parties desirous of having the mine inspected for their own satisfaction.

THE MINERS' FRIENDS—No. III.

MORTON'S PATENT WIRE-ROPE AND SIGNAL BELL.

Little did the author of the "Bal Boy" suppose, when his narrative was being printed for circulation, that the dreadful drama was actually converted into a tragedy in real life, by the death of the poor little boy John Thomas, as was proved by the next week's newspaper. Little thought we in preparing this article of our series that we should have had so sorrowful, yet withal so truthful and substantial, a proof of our assertion and our title.

We subjoin an extract from the *Cornwall Gazette* of Jan. 15:—

John Sprague, aged 65, was killed in Wheal Busy, under the following circumstances:—Richard Williams, the lander at the shaft, deposed that he saw the deceased and his comrades before they went underground. They told him they were going down to send up some attle and a ladder, but he did not know which they intended to send up first. About two hours afterwards he sent down the kibble to them, and after it had been down rather longer than usual, he waited to suppose, from the shaking of the chain and from the sound, that there was a token to wind up, and he gave notice to that effect to the engine-man. He did not know whether they were sending up the kibble or the ladder until he looked out of the shaft, and saw the evidence of the ladder within a few feet of the surface. He then rung for the engine-man to stop the engine, which he did. By that time the end of the ladder was within 4 or 5 feet of the poppet-heads (not higher); and as soon as the engine stopped the slackness of the chain between the pulleys caused the kibble end of the chain to descend a little again, and then stop with a sudden jerk, which caused the lashings by which the ladder was tied to the chain to break; and the ladder and deceased, who was on it, fell into the shaft. Witness did not know the deceased was coming up with the ladder until he saw him above the surface. From the evidence of the deceased's two comrades, it appeared that the deceased, after lashing the centre part of the ladder to the chain, had got on the ladder to fasten the upper end of it in the same way. While he was in the act of doing so, the chain was sent away; one of them immediately caught hold of the deceased's legs, and told him to let go his hands; but he went up with the chain. Neither of them had rung to wind-up; but, in order to lash the ladder to the whin chain, the deceased was obliged to pull the end of the chain towards him, and they both thought the shaking of the chain in that way, and its sounding against the iron staves of the ladder, might very likely be mistaken by the lander for a token to wind-up. The jury were of the same opinion, and returned a verdict of "Accidental Death."

We deem it necessary to insert the article in *extenso*, that our subject may be the better understood, and its merits be the more easily appreciated.

It appears that this poor fellow lost his life in the first place by an improper signal—the mere rattling of the chain in his necessary work, as was proved by evidence, having been misunderstood as a signal to wind-up.

Can this be called anything short of carelessness, a want of some cheap and easily applied adaptation for this purpose, or a sad neglect amongst the men themselves and their employers, even when the parties at surface and below both knew that they were about to send up a rather dangerous lot of stuff? Does it not display a gross fault somewhere? Had one of the little ingeniously contrived, simple, and withal cheap instruments (from 15s. to 17s. 6d. each), mentioned at the head of our article, been provided, this accident would have been prevented, and the unfortunate man spared to his family. The space occupied is trivial, its action certain, and so wholly different from sounds or signs usually employed that mistake is impossible. It was originally introduced to supersede the cumbersome and noisy "clackers," at one-half of the expense of which they may be provided; they are far more effective in sound, without the horrid din of the antiquated instrument, and less liable to be damaged by accident. It is an improvement acknowledged by all who have seen and heard it: so much, however, will prevent its immediate introduction.

THE PATENT LAW, AS RECENTLY AMENDED.—No. IX.

BY F. W. CAMPIN.

ASSIGNMENT OR TRANSFER OF PATENTS.—It will be observed that the letters patent are made out to the patentee, his executors, administrators, and assigns: whence the patent right becomes an assignable right. In law, the patent is denominated an incorporeal chattel, and may be dealt with as such. By the Act of 1852, an assignment or transfer must be registered at the Patent Office. Assignments should be effected by proper legal documents, as otherwise the intentions of the parties may not be effectuated in law.

LICENSES may be granted by the patentee, his executors, administrators, and assigns. Licenses can only be properly made by deed under seal, registered at the Patent Office. In practice, licenses are granted for a year, or a royalty or license due, of so much on each article, or on a given number of articles, with clauses requiring the keeping and verifying of accounts, &c.

LITIGATION ON PATENTS.—Patent litigation is of three kinds:—The action against the patentee to repeal the patent; the proceedings by the patentee against infringers; and the action for the penalty (under Lord Brougham's Act), for the copying of the patentee's name or mark on pirated articles. The action to repeal the patent, termed an action *ex facie*, from the name of the writ under which the proceedings are originated, is an action in the name of the Crown against the patentee, requiring him to show why his patent should not be repealed and cancelled, as being invalid from not possessing those qualities which have been before set forth as necessary in a valid patent. This action can only be brought with the sanction of the Attorney-General, who requires, before he gives his sanction, that a good case should be made out to his satisfaction, and that the party seeking to prosecute enter into a bond (usually for 1000*l.*), conditioned to pay all the costs, charges, and expenses of the patentee, in case the patent be not adjudged to be repealed. The proceedings will be successful if it can be proved that the patent is wanting in any of those attributes which have been already treated of under the headings, "Title of the invention," "Manufacture," "Novelty," "Utility," "Patentee," "Provisional specification," and "Specification." The proceedings by the patentee against infringers may be by bill in Chancery, praying for an injunction to stop the infringement or piracy; and by writ, 42 of the Act of 1852, the common law courts have power to grant injunctions. Or the proceedings may be by an action at law for damages, and then the court may grant injunction. The injunction, in the first instance, is usually a provisional matter, until the patentee has tried his action at law for damages, which he is commonly required to try and to succeed in before the injunction is rendered perpetual.—*Patent Office, Strand.*

CALIFORNIA AND ITS RESOURCES.*

From the large amount of British capital expended in California, and the number of Englishmen deriving advantage from the extended commerce which the gold discoveries induced, an account of the present position of that state will be read with deep interest. The precious metals are of vital importance to industry and commerce; yet the gold discoveries the social condition of all classes and all countries was sensibly improved; there appears everything to justify the anticipation that ere long it will be universally acknowledged that mining enterprises generally has more influence upon the prosperity of every country than any other branch of industry. But the mining of England, and where would be her position, if she could she maintain the pre-eminence which she has enjoyed, the energy, the industry, the perseverance, the English system combined with the energy and perseverance so readily observable in English miners and mine adventurers into France, Germany, or the United States, and how materially would the position of those countries be improved. In the United States, especially, there is ample room for an improved system, as minerals are abundant, and the laws all that adventurers could desire; and in Germany, although their mode of working is held up as a pattern, it cannot be denied that there lacks the English system to which we owe so much. Combine the science of the German in mining operations with the energy and practical skill of the Englishman, and we shall have a system

In referring to California's present position and population, Mr. Seyd remarks that the news of the discovery, although people were at first incredulous, spread rapidly throughout the whole civilised world, and immigrants of all classes poured into the country, the majority resorting to the gold fields, where they met with various success: he then conducts us through the period of California's rising prosperity, so far as regards the value of real estate, and its decline from the falling off of immigration; and, through the proceedings of the "vigilance committee," to the present improved condition of everything calculated to insure permanent prosperity. Fasting on the subject of the gold mines, he tells us more within our province, in which he observes that the chief product of California is gold—a fact well known over the world. Quartz mining will be a profitable investment of labour and capital for hundreds of years, as there are indisputably thousands of leads not yet discovered, and the mines and alluvial deposits of California are capable of enriching the world for ages, being all but inexhaustible. The mines in the immediate vicinity of rivers, or where water was otherwise easily obtainable, do not yield the same quick results as at first—when it was only necessary to turn up the surface to discover a remunerative amount of gold. But, by the employment to a great extent of miners, who will not work for less than \$100 a year, and who, in the ordinary run, will not do so for years. Every

The Gadsden purchase offers little to the agriculturist, but much to the miner, as in mineral wealth it seems unequalled. The Tucson Silver Mines were formerly worked by Mexicans, but have lately been purchased by an American company. The Arizona Copper Mines are the richest ever discovered; there are veins of the ore, and most of it is pure metallic copper.

After referring very fully to the commerce, financial position, and agricultural resources of the country, he remarks on the prospects of the labourer, mechanic, freeman, and concludes with some observations upon the different routes to Australia, and the best means of getting there. The whole work gives evidence that the writer is a thorough master of his subject, and will be of great perusal by any person desirous of obtaining useful information relative to California.

PREVENTION OF STEAM-BOILER EXPLOSIONS.—The annual meeting of the Manchester Association was held on Tuesday (Mr. Hy. Houldsworth in the chair). The committee in their report state that during the past year 3979 visits had been made, and 1592 boilers inspected. These visits had disclosed that 107 boilers, or 6½ per cent. of the whole, were in a dangerous condition; 837 indications of engines had also been taken. The balance sheet still showed a deficiency in the annual subscriptions, as compared with the expenditure. The receipts from all sources during the past year had amounted to 1685*l.* 11*s.* 3*d.*; and the expenditure to 1685*l.* 7*s.* 3*d.*. The salaries of the sub-inspectors had been increased from 104*l.* to 120*l.* per annum. Amendments had been made in the rules, providing for the periodical inspection of boilers by the chief

sub-inspectors. The committee earnestly urged upon members the absolute necessity of numbering permanently each boiler upon their works. The report of the chief inspector, Mr. R. B. Longridge, stated that the number of mills under inspection in 1892 was 355, comprising 1592 boilers, of which the following were a total of 1139: 1139 cylindrical, with internal flues; 100 cylindrical, without internal flues; 11 Galloway's; 131 multitubular; 41 multiflued; 63 Butterley; and 12 wagon-boilers. Of these, 107 were found working in a dangerous state from the following causes: over pressure, 11; corrosion, 17; fracture of plates of angle iron, 18; malconstruction, or inefficiency of safety valves, 12; defective condition of safety valves, 13; defective condition of water gauges, 27; injury resulting from deficiency of water, 9. In addition to these, above, the following were also found defective, but not abnormally so: 13; defective nature of the boiler, 1; defective nature of the boiler, 1; injury sustained were of a serious nature, 1; of such kind, in many instances, required early repairs:—from corrosion, 32; fracture of plates or angle iron, 18; injury from deficiency of water, 42; from defective condition of safety valves, 44; of water gauges, 11; and of pressure gauges 16; making a total of 181. In conclusion, the inspector recommended greater attention to the laws of combustion of fuel; the obtaining more perfect circulation of the water in boilers; the admitting steam more freely to the cylinders; and, where practicable, the increasing of the degrees of expansion. The Chairman said: "The increase of members had been satisfactory—the number of accidents had diminished in the year 1892, and the number of deaths had been strongly indicated by the fact that during the year 15 boilers had been found to be at the time of inspection in a dangerous state; for it must be remembered that the members of the association did not represent more than one-fourth or one fifth of the proprietors of steam-engines in the peculiar district of the association; and, again, looking to the vastly wider sphere of the country generally, it would be seen that 15 of the boilers inspected being found dangerous represented a state of things—business being carried on under so much danger—that imperatively called for an extension of the operations and area of the association. The end must be, that persons who would have had no supervision—inspection by a Government official, or by the officers of an association. So strongly were the feeling of the millowners opposed to Government interference that when the question was once raised he could not suppose that there was one in a hundred in favour of such a step as to boilers. The old rules were then rescinded and a new code, calculated to better meet the requirements unanimously adopted."

PERSONS EMPLOYED ON RAILWAYS.—A Parliamentary return of the number and description of persons employed on the railroads of the United Kingdom of June 30, 1857, shows that the length of line open at that period was 8042 miles (for the whole of the United Kingdom), and the total number of stations 3121; there were employed on such railroads 221 secretaries and managers, 26 treasurers, 150 engineers, 398 superintendents, 198 storekeepers, 201 cashiers and accountants, 997 inspectors of timekeepers, 3471 stationmasters, 404 ticket collectors, 156 draughtsmen, 8713 clerks, 1335 foremen, 3563 engine-drivers, 3644 assistant drivers or firemen, 8716 guards, 2549 porters, 3687 artificers, 3263 switchmen, 1996 gatekeepers, 2549 police or watchmen, 17,091 porters or messengers, 8260 platelayers, 36,282 labourers, and 2585 persons in miscellaneous vanes. The number of employed on the open railroads of the United Kingdom at end of June, 1856, was 102,107, whereas the number now is 109,600. On 3193 miles of unopened railways there are employed at the end of last June, 44,393 persons, so that the railway business of the empire required the services of 153,699 persons of all grades and capacities. Of those employed 116,634 were in England and Wales, 20,172 in Scotland, and 16,891 in Ireland.

Mr. W. Clay, of the Mersey Steel and Iron-Works, who created such a sensation at a meeting of the Society of Arts, on Wednesday, was specially introduced to the gathering by Sir John Rennie, who was the first person to discover the extra-

* *California and its Resources: a work for the Merchant, the Capitalist, and the Emigrant.* By Ernest Seyd. London: Trübner and Co.

pose of the property without the consent of the directors, as it would be necessary to have the seal of the company affixed to make a good title.

A SHAREHOLDER considered they had better wind-up at once.

The CHAIRMAN said he should be happy to do so, if it was the wish of the meeting. Perhaps the proprietor would submit a resolution to that effect?—The amendment was then put and lost, and the motion for receiving the report carried.

Mr. SUTTON next proposed that a committee of investigation be appointed, with power to call in an accountant to assist them. There had been a large proportion of the capital lost, and the object in view was to ascertain the past and present position of the company, and its future prospects.—Mr. CLIFF seconded the resolution.

The CHAIRMAN opposed the motion, upon the ground that in a few months they would be in possession of information that would enable them to determine whether the company should be wound-up or not. The money was lost, and could not be got again. As three directors intended to retire, it would be far preferable to elect others than appoint a committee of investigation.

The resolution was then put to the ballot, when the number of shares in favour of it were 3145; against, 14,645. Shareholders voting for the committee, 14; against, 11.

Mr. RICHARDSON, in a speech of a very personal character, proposed a vote of confidence in Mr. Powles, and that he be requested to resign his seat.—Mr. SUTTON seconded the resolution.

Mr. POWLES having explained, the resolution was then put to the meeting, and declared lost.

The meeting was then made special, and a resolution carried that the number of directors be reduced to five.

THE MARIQUITA AND NEW GRANADA MINING COMPANY.

The half-yearly meeting of proprietors was held at the London Tavern, yesterday, Mr. J. D. POWLES in the chair.

Mr. JONES (the secretary) read the notice convening the meeting.

Mr. RICHARDSON having delivered in a protest against Mr. Powles filling the chair, on the ground that he was disqualified.

Mr. MAPLES, the solicitor of the company, gave his opinion that the protest was of no avail, as it referred to matters, and he was of opinion that under the Deed of Settlement Mr. Powles was duly qualified.

The CHAIRMAN said, notwithstanding the opinion of the solicitor, he would retire immediately if he considered it would benefit the company, but he held largely himself, and many of his friends were deeply interested. The personal hostility of the party was so well known that it was unnecessary for him to make any remarks on the protest.

Mr. MAPLES stated that a former Act of Parliament disqualified a party from being a director who was either bankrupt, insolvent, or compounded with his creditors; but this had been repealed, and, under the present law, only bankrupts and insolvents were disqualified.

The CHAIRMAN said they would now proceed to the business of the meeting. In July last it was stated by the superintendent at Santa Ana that they would make a profit of \$11,000 per month, and, with respect to that establishment, everything was going on satisfactorily. They had engaged seven Cornish miners, and by increasing the European force they were less dependent upon the natives, who became more manageable. He had directed attention to the superintendent to be always looking ahead, that they might be opening at one or two points, in case of any portion of their property falling.

With regard to the profit at Santa Ana, in the seven months it amounted to \$77,693 3 50. Purima, eight months, \$6271 5 75. Marmato, seven months, a loss of \$1151. The financial state at the mines was, according to the last advices, highly satisfactory. At Bogota they had in the mint \$48,141; at Santa Ana, \$15,363; at Marmato, \$13,223; at Purima, \$6560; making together, \$93,377 in favour of the company. The superintendent had expended a large amount in dressing machinery, and if they had a good supply of water it was expected the returns would not fall off, as the general quality of mineral was fully equal to what they had been getting. At Cantio Quebrada they had erected two mills, as at that spot they had a large amount of mineral washed down from the mountains, and which required no mining, as it was merely to take it out of the ravine; and from that work and the mines the directors expected it would give a return of about \$5000 per month.

With regard to the financial position in London, they had at the bankers \$1700, and up to the end of April they expected the total amount would be \$5,650.

It was proposed to declare a dividend of 1s. per share, which would require \$5000, out of the \$1700, in the banker's hands.

The CHAIRMAN said he had received a resolution for a dividend of 1s. per share.

Mr. FATHERLEY, jun., proposed as an amendment that it be 6d.—Mr. FATHERLEY, sen., seconded the amendment, when a lengthy discussion ensued, a large majority being in favour of the dividend of 1s.

Mr. DE PAS considered it would be of great advantage to have the company brought under limited liability; and, as a large holder, he would rather forego the dividend of 1s. at the present time, in order that their responsibility might be limited. He considered the company was in such a favourable position at the present time that they ought to adopt the limited liability.

Mr. SPENCER HERAPATH considered they had better leave the question of limited liability in the hands of the directors, as the moment they limited the company they took away the means of obtaining credit.

Mr. MAPLES said there would be some difficulty in registering the company, as the only method would be to dissolve the present and re-form it.

The resolution proposing the dividend of 1s., payable Feb. 10, was then carried.

Mr. JOHN FIELD said he should propose a resolution that a committee of shareholders should be appointed to carry with the directors as to whether it was desirable to remodel the company with limited liability.

The CHAIRMAN said the directors were of one mind—that if possible they should re-form the company with limited liability.

Mr. JOHN FIELD then proposed that a committee of shareholders should be elected, to confer with the directors as to registering the company with limited liability.

Mr. SPENCER HERAPATH seconded the resolution, and the following gentlemen were unanimously appointed:—Mr. John Field, Mr. Spencer Herapath, Mr. De Pas, and Mr. Yarrow.—The proceedings then terminated.

SORTRIDGE CONSOLS MINING COMPANY.

A quarterly general meeting of shareholders was held at the London Tavern, on Tuesday, Mr. W. A. THOMAS in the chair.

Mr. COCKES (the secretary) read the notice convening the meeting and the accounts (an abstract of which was given in last week's Journal); they were received and adopted, and the minutes of the last meeting confirmed.

Capt. James Richards's report, giving the fullest particulars of the different workings and prospects, was then read.

The CHAIRMAN said, as the accounts had been in the hands of the shareholders, if there were any matters on which they wished information he would be most willing to give every explanation in his power. From the profit shown of 433s. 1s. must be deducted the loss shown in the last quarterly account of 3671, 11s. 4d., so that the profit on the six months' working had been 1157, 9s. 9d. The last account included two months' ore against three months' cost, and the present account four months' ore against three months' cost. The samplings had been monthly, they were now bi-monthly, this being a considerable saving in the expenses. He did not like giving estimated sums, but thought they were pretty correct in those given. There was one feature in this mine which in many others, from the magnitude of the works, could not be carried out; he alluded to paying the labour cost within a fortnight after the expiration of the past month. Also, that merchants' bills which accrued in November were included in the December cost, thus bringing up all the charges to the closest possible time.

The agent's report having been adopted—

Mr. M. RICHARDS said, having been in the neighbourhood of the mine he had been informed that the reserves of ore were considerably more than given by Captain Richards, and believing that they had an excellent mine, and that the returns would continue the same, he would beg to propose a dividend of 1s. 6d. per share.

The CHAIRMAN, in reply, said nothing could be more difficult to arrive at than the actual reserves in a mine. Captain Richards's opinion was borne out by Capt. Clynm, who had inspected the mine, and from his personal knowledge of the former thought they might put every confidence in his report. However careful an agent might be in his calculations, the ground might alter, which would carry them astray. An instance came to his own knowledge—a piece of ground of above 10 fms. in depth had a block of bad ground which came in between the ore which was in the level above, and extended to within 5 in. of the top of the level below, and the ground was estimated to turn out 3 tons of ore per fm.

It was then moved by Mr. RICHARDS, seconded by Mr. H. W. PATTIS, that a dividend of 1s. 6d. per share be declared, payable on Feb. 20.

Mr. HALLETT observed that, as far as he was concerned, he would have preferred that the dividend should have been delayed so that they might have made a larger one at the next meeting.

Upon which the following amendment was proposed by Capt. THOMAS, and seconded by Mr. McCALLAN:—"That as it appears there is not sufficient cash now in hand to pay the proposed dividend, it be not declared at this meeting." Upon a division, the amendment was lost; the original resolution, declaring the dividend, was then passed.

Mr. W. MICHELL would beg before the meeting separated to offer a few remarks, having been underground and inspected the mine. They had a very large and powerful cross-course, and it was his firm opinion that their main lode was farther north, and he should advise that Capt. Richards be requested to force on the works on that point.—The CHAIRMAN said the suggestion should be attended to.

The committee of management were re-elected, and a vote of thanks to them for past services, and to the Chairman, terminated the proceedings.

EAST MONA COPPER MINES COMPANY.

The first annual meeting of proprietors was held on Jan. 22, at the company's offices, in Liverpool, Mr. W. H. GEE in the chair.

The CHAIRMAN said it would be seen by the reports of Capt. Williams and of the geologists that the neighbouring Mona and Parry Mines did not contain all the copper of the island; and, on the contrary, that the whole of the locality abounded in mineral wealth. In his opinion, the proceedings detailed in the report confirmed those views; and though the report of Capt. Williams warranted the expectation of the Chairman, that the funds in hand would suffice, he (Mr. Chaffer) was prepared to incur any expense that might be necessary to develop what he considered the valuable district comprised in the grant.

The committee of management were re-elected. A vote of thanks was given to the Chairman, and the meeting separated.

REPORT OF CAPT. WILLIAMS.

In obedience to the wishes of the company, I forward you my general report respecting these mines. They are situated in a short distance from the town and Port of Amliwa, on the lands of Mr. Roberts, under a lease, for the liberal terms of 1-16th

royalty. The grant comprises about 120 acres of mineral land. I cannot better describe their position than by quoting from the report of Capt. Vivian, who surveyed them last May, wherein he states that he "considers their local situation very good, being about two miles east in the direction of the celebrated Parry Mountain Mines (Mona and Parry Mines). The formation also is generally very similar to that; besides, there have been some workings on the side, and immediately adjoining this site, in a mine called Rhosmonarch. I understand some hundreds of tons of ore were raised there." These statements I confirm, and have to inform you that a new company is being formed, who intend working these mines with renewed energy.

Capt. Vivian further observed that in the set are several mineralised courses, chiefly quartz, cropping out at different points, bearing on them spots of bluish-grey of copper, iron pyrites, lead, &c., and, speaking of the place where I have since sunk Duncanson's shaft, he adds, "There is one of these opened on at a little distance north of the water shaft, that looks more favourable than the others, and I think it would be well to give this some trial, which may be done by sinking a shaft perpendicularly about 20 yards north of the outcrop;" and he recommended that operation. I concurred in this opinion, and accordingly Duncanson's shaft was sunk, under my superintendence, at the point indicated by Capt. Vivian. At the depth of 14 yards we caught the lode, which had dipped faster than I expected from its appearance at the outcrop. It had greatly improved, was about 3 ft. thick, and full of sulphuretted copper, blende, lead, &c., extending east and west through the shaft, completely justifying the estimate which had been formed of it by Capt. Vivian and myself. As far as the lode can be traced, it stretches in a continuous body across the set for a considerable distance in the direction of the Mona and Parry Mines. The more we see of this lode the better it looks; after cutting it, we worked on it a few days, and every day it had a better appearance. It was then determined to continue the shaft vertically to a depth which would serve as the line of an adit level, for which the lode is favourable. Accordingly I have sunk the shaft to the requisite depth; the work progresses satisfactorily, and I hope by the end of another two months we shall be raising some good copper ore for the market, as I have not the least doubt but that the lode will continue to improve.

Both wells' shaft, which Capt. Vivian also examined, and in which he reports that he found veins of copper, was considered by him a little too far north from the Rhosmonarch lode, and he recommended the south level, which had been driven some distance, to be extended, especially on account of the vein found at the extreme end of that level, which he held as "probably indicative of there being other and stronger veins at no great distance." He also recommended that another vein, found crossing this shaft at 13 yards from the surface, and easy for driving, should also be driven on.

I have not, however, commenced either of these operations, preferring at present to prosecute the works at Duncanson's shaft with all the means at my command. As to the shaft, where I am convinced we have the lode which made the copper in Rhosmonarch from 3 to 4 ft. wide, I have also, as yet, for the same reason done nothing further. All the works should undoubtedly be proceeded with as soon as the forward state of the drift from Duncanson's shaft will admit. Without exciting any undue expectations, I feel warranted, by the general character of the ground, the confirmation of Capt. Vivian's and my own view respecting the lode at Duncanson's shaft, and the good neighbourhood of the set, in expressing my strong conviction of the success of the undertaking.—JAMES M. WILLIAMS.

TREWETHA MINING COMPANY.

A meeting of shareholders was held at the offices, Threadneedle-street, on Tuesday, Mr. JOHN BALSTRA in the chair.

Mr. DUNSTON (the secretary) read the notice convening the meeting, and the following report from Capt. Thos. Richards and Wm. Rowe:—

Jan. 23.—Since the last general meeting we have changed all the pitwork from the 50 to the bottom of the mine, and attached an additional boiler to the engine, the whole of which answers our fullest expectation. The engine-shaft has been sunk 5 fathoms, making the whole depth 9 fms. below the 70; in the latter 4 fms. the ground is of the most favourable description—a beautiful conglomerate kilaas, and we have every reason to hope the lode, when reached in the next level, will show a decided improvement.

The 70, south from engine-shaft, has been extended 16 fms. 4 in.; this ground has been of a fine, productive, varying in value from 5s. to 3s. per fathom. The 70 north has been extended 11 fms.; throughout this drive the ground has been hard, and the lode, comparatively speaking, poor; the present end now appears to be changing for the better, and we expect an improvement, as the lode in the winze over this point and the 60 northward therefrom, for 15 fms. in length, is tolerably productive.

The 60 north has been driven 31 fms. 3 ft. 6 in.; the former 16 fms. varied in value from 5s. to 2s. per fm., in the latter 5 fms. the lode has been discovered and poor. The 50 has been extended north and 13 fms. 4 ft. 6 in.; no paying ground has yet been discovered, but the level should be continued with all possible speed towards the junction of the two lodes, about which there is a very fine, eleven course, and altogether this may be considered a very promising piece of new ground. The stopes now working are producing about 4s. worth of ore per fm. We recommend sinking the engine-shaft 12 fms. below the 70 before cross-cutting to the lode, as having such a favourable change in the character of the ground, we consider the chances of an improvement at that depth much greater.

The following statement of accounts was then read:—

Balance last audit	£ 291 13 11
Labour cost, Aug. to Dec.	2183 10 7
Merchants' bills	1093 13 5
Royalty	59 0 5
Interest	18 9 3
Bill stamps and drafts	2 0 6
Calls received	640 5 0
Ore sold	1781 9 4
Property tax returned	6 4 3
Leaving balance against the mine	£1222 0 4
Less arrears of call	383 15 0
Total balance	£ 838 5 4

The CHAIRMAN said that the committee thought it advisable to sink the 50 with-out stopping, instead of driving the 70, as in the latter case the lode was poor between those levels, and rich afterwards. They would, by the course proposed, get down sooner, and save expense.

Mr. DUNSTON explained that their 70 fm. level was really 73 fms., which left but 17 fms. to reach the 90; of this they had already sunk 9 fms., so that the real question was whether they should put out a cross-cut at 12 fms. below the 70, or sink an additional 5 fms., and drive at the 90. By this course, they would have 17 fms. of back instead of 12, and, presuming the lode to turn out well, it would be a great advantage.

Mr. ROWE explained the expense of sinking, and the time it would take to do the work proposed.

Mr. DUNSTON said the present price for sinking was 21s. per fm., and the sinking would take about three months.

The report and accounts were then unanimously carried, a call of 5s. per share made, and a resolution passed for adjourning the meeting to Feb. 10, for the forfeiture of shares on which the calls to Sept. 23 remain unpaid.—The meeting then separated.

Mr. Crofts said the following reflections on the state and prospects of the market:—The old joke about money being a drug, is no longer a joke but a reality. The most present of observers in financial matters, and amongst them were, of course, those who thought it prudent to pay 9 and 10 per cent. upon eight months' bills in India, did not foresee that in an incredibly short space of time the nominal value of the commodity at the Bank of England would be 4 per cent., and its real value amongst bankers and capitalists only 2 per cent. 1 And, as all this latter quotation was not long since, it is an unrepresented amount of business for war, the best feature of which is, we are happy to say, without producing any marked degree of excitement or extravagant advance in prices. The public are certainly recommended to invest whilst the margin for profit on the most appreciable class of shares remains so large, but not forgetting due caution in the selections of stock, relative both to merit and prices. Some handsome dividends have also been distributed during the week, and more are promised as forthcoming, whilst a strong list could be offered of mines rapidly approaching their first dividends, and which may be considered as the class more likely to pay a large premium upon the ordinary than other actual dividend or prospective ones. Special attention is drawn to them accordingly.

Another feature of the market is, that "jobbing" in shares occupies less the attention of dealers than *bona fide* transactions. Possibly the dealings between A and B, in this very unobscure branch of business (since one of them must gain and the other lose) is not found in its results so agreeable as in operation; and of its evils, in fictionally raising or depressing the value of shares there can be no doubt, when it is considered that the public, singularly enough, but generally, buy at the highest and sell at the lowest prices; the maxim of a great statesman to the direct contrary notwithstanding. A curiosity of the moment worth noting is, that whilst many thousands sterling have been turned over every day during the past week in shares, spreading, probably, over fifty mines in the aggregate, the so-called "Mining Exchange," specially instituted to record prices and report business, has published this important week, up to the time we write, an average of about half a dozen mines per diem, and even those not particularly accurate records of the actual market value of the shares mentioned. Be it understood, however, that we are far from enemies to the institution and success of a real "Mining Exchange," and hope sincerely that, with the improved prospects of business, something will be done to make the society better than a nonentity; that in the Stock Exchange a respectable amount of business is reported daily; the brokers of that establishment supplying themselves from dealers in mines proper, and thus an intercourse is kept up between the two classes, of value to both, it being perfectly natural that a large amount of capital should find its way to the Stock Exchange for every legitimate purpose, and that the formerly neglected, because almost unknown, interest of mining should in course of time become, as it is daily more and more becoming, thoroughly appreciated.

Messrs. Powell and Cooke have communicated the following remarks:—

The advance in the prices of copper and tin has caused great buoyancy in the market during the week. A considerable amount of business has been done in the shares of good dividend and progressive mines, at advanced prices. There is yet a large margin between the present and former price of shares that were ruling previous to the panic. Money having become comparatively cheap, together with the prospect of a further rise in the prices of metals, will, doubtless, have a tendency to enhance the price of mining stock for some time to come. And seeing that the market is more free from new concerns than at almost any other period, greater attention will be paid to the mines that are well established and practically managed, which offer such advantages for the investment of capital as do not exist in any other security. We feel assured that if the public be fairly treated the result of their investments will be such as to cause a renewal of confidence in British mines as a medium for the employment of capital. We have to record improvements in several mines during the week. At Vahet of Towry, the lode in the 60, north of Bonville's shaft, is producing 35 cwt. of lead ore per fm. against 25 cwt. last week; and driving south, in the same level, the lode is producing 25 cwt. against 18 cwt. in last week's report. This mine at no former period presented such favourable prospects as at present, and the resuming of dividends at the next meeting appears to be beyond a doubt. South Frances shares having receded from 240, 250 to 180, 185, owing to the disputed boundary with West Basset, have been in good demand, and have advanced to 210, buyers. We are advised of an improvement in the 104 and 40 fm. levels going out in the former mine; the last bi-monthly dividend was 7s. but with

the improvement in the standard larger profits may be anticipated in future. Buyers have advanced from 280 to 300, buyers. Alfred Consols have advanced from 13 to 14½, 15. Talvaddens have been in fair demand at 6½ to 6¾. Sortridge Consols at 26s. 3d. to 27s. 6d., with dividend. The prospect of declaring this dividend, seeing that the prospect of the mine are at present a little cloudy, has been a subject of much discussion. We hope, however, and fully believe, that when the levels are extended further west, something of importance will be met with there. It will be remembered that these shares were at one period selling at 7 to 7½; and the prospects in the 30 fully warranted the price, as will be seen by the quantity of ore that has been sold since the mine commenced, which, including earnings, amounts to 38,940l. 9s., the principal part of which was raised above the 40, east of Hitehins's shaft, thus showing the richness of the lode for some 60 fms. in length in this part of the mine. We make these observations, as the question is sometimes asked why Sortridge Consols were ever 7½ per share? It is apparent to any one at all conversant with mining operations, that had the lode been as valuable in the 40 and 50, as in the 30 and 30, this mine would have been second only to Devon Great Consols in the whole district. St. Day United Mines have been largely dealt in at 19s. 6d. to 21s. per share, owing to the improvement in the lode in the 80, west of Singer's shaft; this, together with the advance in price of copper and tin, will tend to augment the monthly profits of these important mines. A dividend of 1s. will be declared at the coming meeting. Wheel Bassets have been in demand, with almost an absence of sellers. Kelly Brays fully maintain their late rise; the advance is warranted by the improved prospects of the mine. The discovery of the same shoot of ore in the 45 as is seen in the level above (the 35) has considerably enhanced the value of this property. Wheel Kitty (St. Agnes), under the able local management of the new agent, is showing evident signs of again becoming a profitable concern. Great Hewas, but for the depressed state of the tin market during the past six months, would ere this have been working at a monthly profit. It reflects much credit on the management to find that a great deal of tin ground has been laid open and reserved, while at the same time the cost has nearly been met by the monthly sales. With the improved price of tin, this mine, we believe, will, for the future, be worked at a good profit, and is likely at no distant period to become a dividend property. Wheel Edwards have not been much dealt in; we have much pleasure in stating, however, that the mine is opening out splendidly; the south lode, at the shaft, is turning out 22 tons of good ore per fm., and still improving; every facility is afforded to parties desirous of having the mine inspected for their own satisfaction.

Little did the author of the "Bal Boy" suppose, when his narrative was being printed for circulation, that the dreadful drama was actually converted into a tragedy in real life, by the death of the poor little boy John Thomas, as was proved by the next week's newspaper. Little thought we in preparing this article of four series that we should have had so sorrowful, yet withal so truthful and substantial, a proof of our assertion and our title.

We subjoin an extract from the *Cornwall Gazette* of Jan. 15:—

John Sprague, aged 55, was killed in Wheel Boy, under the following circumstances:—Richard Williams, the lander at the shaft, deposed that he saw the deceased and his comrades before they went underground. They told him they were going down to send up some attle and a ladder, but he did not know they intended to send up first. About two hours after wards he sent down the kibble to them, and after it had been down rather longer than usual, he was led to suppose, from the shaking of the chain and from the sound, that there was a token to wind up, and he gave notice to that effect to the engineman. He did not know whether they were sending up the kibble or the ladder until he looked down the shaft, and saw the end of the ladder within a few feet of the surface. He then ran for the engineman to stop the engine, which he did. By that time the end of the ladder was within 4 or 5 feet of the poppet-heads (not higher); and as soon as the engine stopped the slackness of the chain between the pulleys caused the kibble end of the chain to descend a little again, and then stop with a sudden jerk, which caused the lashings by which the ladder was tied to the chain to break; and the ladder and deceased, who was on it, fell into the shaft. Witness did not know the deceased was coming up with the ladder until he saw him above the surface.—From the evidence of the deceased's two comrades, it appeared that the deceased, after lashing the centre part of the ladder to the chain, had set on the ladder to fasten the upper end of it in the same way. While he was in the act of doing so, the chain was sent away; one of them immediately caught hold of the deceased's legs, and told him to let go his hands; but he went up with the chain. Neither of them had run to wind-up; but, in order to lash the ladder to the whim chain, the deceased was obliged to pull the end of the chain towards him, and they both thought the shaking of the chain in that way, and its sounding against the iron staves of the ladder, might very likely be mistaken by the lander for a token to wind-up. The jury were of the same opinion, and returned a verdict of "Accidental Death."

We deem it necessary to insert the article *in extenso*, that our subject may be the better understood, and its merits be the more easily appreciated.

It appears that this poor fellow lost his life in the first place by an improper signal—the mere rattling of the chain in his necessary work, as was proved by evidence, having been misunderstood as a signal to wind-up. Can this be called anything short of carelessness, or a want of some cheap and easily applied adaptation for this purpose, or a sad neglect amongst the men themselves and their employers, even when the parties at surface and below both knew that they were about to send up a rather dangerous lot of stuff? Does it not display a gross fault somewhere? Had one of the little ingeniously contrived, simple, and withal cheap instruments (from 15s. to 17s. 6d. each), mentioned at the head of our article, been provided, this accident would have been prevented, and the unfortunate man spared to his family. The space occupied is trivial, its action certain, and so wholly different from sounds or signs usually employed that mistake is impossible. It was originally introduced to supersede the cumbrous and noisy "clackers," at one-half of the expense of which they may be provided; they are far more effective in sound, without the horrid din of the antiquated instrument, and less liable to be deranged by accident. It is an improvement acknowledged by all who have seen and heard it: custom, however, will prevent its immediate introduction. "Wheel So-and-so has got clackers, and we must have clackers too."

But the more immediate and actual cause of J. Sprague's death was not from the signal: the poor fellow, when he found the kibble moving under his feet, with a presence of mind truly astonishing, but which miners frequently display in times of danger, mounted the ladder, the only chance for life, and clung to it during its rapid ascent. To persons who do not know what mining is it may appear an easy task, but, to those who do, it is known to be one of the greatest possible risks. It is wonderful that he was not smashed to atoms, or thrown out, by the kibble being dashed from side to side against the walls of the shaft, or that he had not been knocked on the head by some projecting rock. He must have had a dreadful time of horrid suspense during his ascent, as he must have been aware of his danger. When, however, he was nearly at the surface, his comrade saw him, and gave instant orders to stop the engine, for had the kibble been allowed to rise its usual height, the long ladder would have gone above the poppet-heads, and the man most certainly have been thrown off and killed. As it was, with the best intentions on the part of the lander for the preservation of his fellow-workman, his life was sacrificed by the re-action, or what is called the "swag" of the chain; the unusual weight overcame the resistance, and the kibble fell with a jerk, when the fearful consequences detailed ensued.

Being in Cornwall lately, and having heard that a wire-rope of the length of 145 fms. had been fixed to the skip-way at South Frances, we went there for the purpose of observing its action. The captain (Pascoe) was loud in the praises of its advantages; the machinery is perfectly adapted for its application, it is exceedingly simple, and possesses the following manifest superiority over chain in such situations—far less friction, total absence of the rattling noise, and freedom from the "swag" (the cause of the recorded accident) from the poppet heads to each, and between each of the sheaves, its being attached to the skip prevents its abrasion by the shaft walls; it requires far less power, the small friction renders greater speed attainable, whilst its being worked through a box of grooves keeps it free from rust and in perfect order. To test its working we rode up in the skip from the 118 fm. level, and in 2½ minutes were safely landed at the surface, a signal on one of the patent instruments having been given; the man at the surface was not aware that agents or men were ascending, but only ore as usual; his surprise was great indeed to see a skip full of mortality instead of copper, and expressed his wonder that the captain dared to break his own positive orders. It was done, however, to test its security and steadiness of action; few would dare the feat by chain, as the rebound by the "swag" is always severe, the rigidity of the wire-rope effectually prevented that effect; the journey was performed with perfect ease, not half so much jolting as a ride on the West Cornwall Railway would involve, the only jerk experienced being at the change from the underlie to the perpendicular of the shaft. On enquiry, it appeared that the kibble-fillers, when weary, had frequently smuggled themselves up in the skip. Captain Pascoe expressed himself satisfied that by due caution this would be a desirable mode of ascent and descent for miners: the skip, when filled, brought up 25 cwt. of ore at a time, and hauled it from the 118 fm. level in 2½ or 3 minutes. No time is lost by there being only one skip—at the bottom a false or fixed skip is filled, whilst the full one is ascending or descending; by withdrawing a bar the empty skip is filled from the fixed one in a second, and hauling again commences. The agents declare a considerable saving in the cost of drawing is effected, but we are disposed to consider it in a still more favourable light—viz., its application to effect the ascent and descent of mines; speaking practically of its perfect ease and undoubted safety.

We have seen these ropes in use at various collieries applied to this purpose with perfect success, to the entire exclusion of hemp and chain. Had one of Morton's wire-rope and signals been used in the shaft where the poor miner was killed, not only would profit have been gained to the adventurers by their adoption, but the accident prevented, and the life of

the unfortunate, but self-possessed, man spared to his family. We are aware time is required to overcome that prejudice which is invariably excited against novelty and improvement, and in favour of old usages. The proprietors of these invaluable inventions must wait their time ere they can persuade the miner to introduce novelties, however important and effective. We urge mine proprietors to visit the South Frances Mine, take a ride up and down, when we ever having seen and experienced them in use, they will admit at once they are really the "Miners' Friends."

GEOLOGY AND MINING.—No. I.

The relation of Geology to Mining, or indeed that of any science to the industrial pursuit with which it is most nearly allied, is evidently a consideration of the very greatest importance. I propose in these papers shortly to discuss what, in this instance, the relation is, and how the Science can be brought to bear upon the Industry so as to produce useful practical results.

But in thus looking at Geology in a practical point of view, we must be careful to remember that this is not its main object. The real aim of this science, as of every other, is the mere pursuit of scientific truth, without any regard to its applications to the use of man. When the general public, or practical men, fail to bear this in mind, it is not surprising that the progress of many departments of science should be entirely misapprehended. Science is not utilitarian; it investigates and teaches us the great laws of Nature, and, in doing so, it has done more to elevate mankind, and fix the progress of our race on a secure foundation, than all other human teaching combined. From astronomy, we have learned that our earth, instead of being the mighty centre of a petty system, is really, in the universe of worlds, more insignificant than one drop of water in the ocean, or one grain of sand in the desert; while within the last 60 years the progress of geology has incontestably proved, on evidence utterly undeniable, that this earth has existed, peopled by various and ever-changing races of animals and plants, through ages of time, compared with which the creation of man is an event of yesterday.

Such are the main objects of Science—objects so noble and inspiring that few indeed are now to be found to carp at them with a *cui bono*. If there be some—if there be yet men who would limit science merely to utilitarian purposes—narrow it to those uses which obviously bear on the immediate practical relations of life—the scientific man has the most complete answer. In a thousand instances he can show that such restricted views have merely succeeded in gaining equally restricted results. He can prove that those who have followed such a course in science—the Chinese, for instance—have certainly not been without some success in bringing it to bear on the affairs of life; but a success narrow and contemptible compared with that achieved by those ages and nations who, with more generous and wider views, have first sought truth, and left practice to follow. This argument has been so well applied by Dr. Lyon Playfair, that I cannot do better than quote his words:—

"It is but the overflows of Science that thus enter into and animate industry. In its study we are never sure that the morrow may not gladden the world with an application of a principle to-day abstract, and apparently remote from practice. Nothing is more erroneous in their case than to neglect the acquisition of abstract scientific truths, because they appear remote from practice. . . . Let us turn to Chemistry proper, and see how this supports the text of the argument. It is an old science, and from the time of Tubal Cain to that of Liebig has been progressing steadily onwards, though not always with similar aims and aspirations. The alchemists, as England now errs, by valuing and studying only practical applications, instead of following abstract laws. Health, wealth, and longevity comprised their aspirations. In the place of eternal truth. . . . As soon as Chemistry began to be studied for the mere sake of abstract truth, then she began to reward man for his unselfishness by numerous collateral results, having a direct material benefit."

No honest or candid man, acquainted with the history of the progress of discovery, can deny the force of this reasoning. A large portion of our advance in material civilisation is due to discoveries made in the pursuit of Science, quite irrespective of any thought of practical application; and, judging from analogy, we may certainly hope that future discoveries of equal, if not greater, practical importance to man are yet to be similarly made.

But while the main stream of Science flows on in its glorious course with little thought or concern as to its utility, there is another branch advancing side by side with it which, although humbler in its purpose, is not less essential to the progress and comfort of mankind. This is *practical or applied science*, the object of which is not the pursuit of abstract scientific truth, but the application to the affairs of life of the known principles of Science. It has few sources of its own, but is fed by the overflows of its greater companion, with whose progress or stagnation it is inseparably connected. Thus it is with Geology and Mining; they are not co-ordinate with each other. The aim and scope of the former is far beyond any mere practical applications to the latter; yet it is indispensable to it, for only from its *overflows* can mining assume the position of an applied science. What these overflows are, or, in other words, what parts of Geology are likely to aid the industry of Mining, it will now be my object to consider.

The great scope of Geology is evidently sometimes far from being fully appreciated. It is really immense; for its objects are to investigate the successive changes that have taken place in the organic and inorganic kingdoms of Nature from the present time, as far as we can trace back into the vista of ages. The complete study of a science so vast is not merely beyond the hope of individuals, but is even beyond the grasp of any one time. As different ages have been marked by the almost exclusive pursuit of different subjects of knowledge, so may we expect in the future that the intelligence of various periods will be applied to the investigation of different branches of Geology. In our time Paleontology, or that part treating on past organic life, has almost exclusively occupied the attention of the modern school of English geologists. As far as mining is concerned—I am now speaking of metallic mining—this is unfortunate, for it is not the portion of Geology from which we could expect much help. *Mineralogical Geology*, which was first reduced to order and precision by the labours of Werner, and which (at least as far as we can see at present) seems to be the only department of the science which has any extent practically bears upon mining, has received comparatively but little attention in England during the last half-century.

Before I enter upon my subject, I find it will be necessary, in the first place, shortly to discuss the relative positions of Geology and Mining at the present time, and particularly to enquire into the grounds of the grave charge of "theorising" which is so often made against scientific men.—

HEINRICH BEIGMANN.

RATING OF MINES.—In the discussion which took place at the meeting at Truro of the committee appointed to represent the mining interest of the county, which meeting was briefly referred to in our last Journal, Mr. Robartes stated that he had no reason to alter the opinion he had previously expressed; and to prevent the profits and machinery of mines being rated, he argued that the lord should be rated on his royalties, and his name inserted on the rate book as the occupier; he thought that the Act should either be made prospective in the operation, or that the lord should be compelled to pay the rates on existing leases, notwithstanding any intended bill. Mr. Michael Williams was desirous that the bill should be introduced, and the lord rated on his dues. Mr. Allen saw no necessity for introducing the intended bill; he contended that mining conferred a great benefit on agriculture, and that it was bad policy to add any burdens on the employment of the population. Mr. P. P. Smith thought it would tend to remove all doubt respecting rating profits by rating the lord as occupier. Mr. Beger would not object to such a course. Mr. Morcom considered that the evidence given was very conflicting, and with respect to the opinions of the members of the select committee they were anything but unanimous. When he came there that day he had not been, and, therefore, was of the same opinion as before. He was convinced that if a bill were introduced on the basis of the report of the select committee, it would be doing that which was never intended by the local committee. He alluded more particularly to the amendment proposed in select committee by Mr. Williams—that the lord should be rated on his dues; which amendment was negatived. Mr. Williams had always stated that he was desirous of seeing the mode of rating mines restored which had existed previous to the trial of the case *Rex v. Tremayne*; the provision referred to was, therefore, a most important one, and he (Mr. Morcom) did not see how they could promote any bill founded on the report of the select committee. The case of existing leases was altogether overlooked in that report, which must operate injuriously and oppressively on the lessees; and the burden of such a bill as was now intended, based on the report of the select committee, must ultimately fall on the mining interest. After reading the evidence given before the select committee, and their report, he thought the local committee ought to adopt a resolution to the effect that this committee, after examining and giving their most mature consideration to the evidence given before a select committee of the House of Commons, and their report thereon, and seeing the conflicting and contradictory evidence, and the great division of opinion among the members of that select committee, this committee are of opinion that great anomalies exist in the mode of rating mines, but they also find that greater anomalies exist in other descriptions of property, and that there is great difficulty in legislating on this intricate subject, which is one of the utmost importance and magnitude to the nation at large. The committee would respectfully recommend non-interference at present; but should the Government of the day deem it necessary to introduce a bill on the subject of anomalies generally, this committee pledge themselves to use their efforts in getting the mining interest placed on fair and equitable grounds. Seeing that he would be in a minority, and as his resolution found no second, Mr. Morcom did not press it. Mr. Kendall pledged himself that due notice should be given of the introduction of the bill, and opportunity afforded for considering the bearings of the measure. The resolution to take no steps until the tenor of the bill was known, which we published last week, was then carried *sem con*.

MINING NOTABILLIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

ASHBURNTON UNITED TIN AND COPPER MINES.—It is satisfactory to find that during the depressed state of trade, and the severe tightness of the money market, which have prevailed for the last few months, a wealthy and spirited company has been formed to effectually work these mines. The completion of so difficult a task during such a period seems almost incredible; and I can only attribute the fact to the indefatigable exertions of Mr. N. Kennor and Capt. Wm. Hosking, who have been engaged in the work, and to whom great praise is due. I am proud to find that the management of the mines is vested in the hands of these gentlemen, who are decidedly the right men in the right places; and, under such an able management, I do not hesitate to state that the mines will realise the most sanguine expectations of every shareholder. Operations are now commenced, and several tons of tin drawn to surface.—W. W.

MINERAL WEALTH OF MONTGOMERYSHIRE.—Having had an occasion lately to pass through a rich mining district in this county, my attention was agreeably called to the excellent prospects of mines almost, I may say, unknown to the immediate neighbourhood, occasioned by their being held chiefly by private gentlemen. Had publicity been given through your valuable Journal, doubtless the excellent result, which I was sorry to see almost at a stand, would have been eagerly taken up by some spirited company, and ere this success would have resulted from its working. The sett I allude to is the Cayan Mine, in the parishes of Llanbrynmair and Darowen, and held under a lease from Sir Watkin W. Wynne, Bart., for 21 years, at the moderate rate of 1-16th. The adjoining mines are the Dyffyl, Dyffwyllyn, Brynffynon, Rhoswyl, Bacheldion, and Tysal. These celebrated mines are well known in the locality as being profitable to the shareholders, but are not generally known, being, with the exception of one or two, held by private gentlemen. There are several lodges laid open, and much work has been done at Cayan, both underground and at surface. The stratum is very congenial for making large quantities of lead; and, taking into consideration the extent of the sett, the present cheering appearance of the different levels, the character of the lodges, the geological position of the mine—I do not hesitate to say, with other practical miners, that if Cayan was properly worked by a spirited company it would soon rank with its neighbours, and would remunerate the shareholders for their outlay.—FAIR PLAY: *Aberdovey*.

TOLVADEN MINE.—Private letters, on which we can confide, state an improvement has taken place on the east of the cross-course, giving every appearance of meeting with a course of ore shortly. The bottom level west is improving; the ground at the engine-shaft is also looking more favourably daily. Every information we get seems to point out this mine as the great Cornish triumph of the time.

DARTMOOR.—Seeing in your last Journal some remarks on Dartmoor and its minerals, and having traversed over this vast tract on several occasions, allow me to say that I have never heard of, or seen, but on one occasion, copper in Dartmoor. Granite or lead has been found in abundance, and no doubt by the ancients worked largely; the only mine that has been productive and profitable for copper was the Wheal Friendship, which was worked for a long time, and produced a large dividend. But, no doubt, if mines near the Dartmoor granite were properly worked, and to sufficient depths, that many a good mine would result, and be equally productive. The best lead mine near Dartmoor granite was the old Wheal Betsy, near Wheal Friendship, worked by Messrs. Taylor and Co.; thousands of tons of pig-lead have been smelted, and a great quantity of silver refined. This mine was carried on for some time, raising large quantities, and smelting on the mines their own ore. Report says now, with proper and efficient machinery, this mine would pay profits; at last working the machinery was bad, and there was a continuation of breakages, which incurred heavy expenses, and this stopped the old Wheal Betsy.

GREAT WHEAL VOR.—The decision of the committee, that the whole of the staff shall work at a vast reduction of their wages (if report be correct, 30s. per month, it will not be submitted to) has created quite a sensation in Helston and its neighbourhood; it is also said that the men are in a state of rebellion in all parts of the mine—a physical impossibility, it will be deliberately murdering the men to work so long in some parts—which will lead to all the best men deserting the locality for places where they will be treated like men, and not worse than slaves.

EAST RUSSELL has every appearance of making a good and lasting mine; and bearing corroborative evidence to the reports given some years since by Mr. Josiah Hitehins against the opinion of so many others that there never was any copper there, and no ore ever would be found. The last parcel, with carriage, fetched more than 700*l.*, and from 20 to 30 tons of rich ore for the next sampling are ready on the floors. Capt. W. Metcalf, the late agent, always spoke highly of the mine, as well as Capt. Matthew Francis, against all the host of opposition.

HUCKWORTHY BRIDGE.—The whole of the staff on this mine seem to have been reformed. No reports in the Journal, and with a lode well worthy of a report every week. They have just cut into the lode; it is 8 feet wide, and as "green as a leek."—G. G.

WHEAL EMMA (Buckfastleigh).—An important discovery has been made in new ground near this mine. A lode of copper from 4 to 5 ft. wide, containing rich grey and malleable copper, and a gossan of the finest description, is found running into a hill, which gives 80 fms. of backs in the adit level. This sett is granted by the Earl of Macdonald to the adventurers in Wheal Emma.

THE VIRTUOUS LADY MINE is looking well, and will soon be in the sampling list with a good pile of rich ore. The proprietors are taking the right steps to have this mine developed by offering high tribute. The old workings are immense, and vast quantities of ore must have been taken away and sold during the short time that it last worked, and with a few miners nearly 6000*l.* worth of ore was sold, and there is no doubt that by Capt. J. Williams' time 100,000*l.* worth was sold. It will well repay the trouble of a visit to these vast caverns and specimen vaults, which the mine has been so celebrated for. On Monday last the Old Lady was visited by a large party of ladies and gentlemen, who explored this mine in a manner like manner, such as would have done credit to many a miner for their courage. They formed a motley group, the ladies wearing the miners' dresses, with candles in their hands. On reaching the surface a good spread was laid in the counting-house, to which ample justice was done. The Chairman proposed the health of Her Majesty and the royal family, which was responded to by three good English cheers. Next followed—Long life and health to the Princess Royal and her Consort. Success to the Virtuous Lady, and the neighbouring mines. Nor was the working mine forgotten on this auspicious occasion, each individual working thereon having a shilling presented to him to drink—Long life and prosperity to the Princess Royal of Great Britain, and her husband the Prince of Prussia. Thus ended the celebration of the royal wedding-day at the Virtuous Lady Mine.

MIKEN HEAD MINE.—From the advertisement in our paper of last week, it appears that this mine is to be sold on Wednesday next, at the offices of Master Brooke, in Dublin. We are informed that it is very probable, from the long delay that has taken place under the Winding-up Act, and the apathy shown, that the lease of this property can be obtained at a comparatively small cost, and with a good title. The Miken Head Company had paid 4000*l.* in cash for the mine, but their affairs having been mismanaged they had not the means to work it.

CHANCELOESVILLE FREEHOLD COMPANY.—We have been informed that Captain Hoskings, the agent of these works, has applied to Lord Napier, the British Minister at Washington, in order to ascertain if he can in any way assist him and the unfortunate miners, to whom wages are due from the directors. This nobleman has replied there is no fund available for the purpose of assisting British subjects in distress; but, at the same time, he has promised to write to the authorities here, detailing the position of the agent and the men, in the hope that means will be taken to rescue them from the dilemma in which they have been placed by the culpable neglect of those who employed them. Notwithstanding these unfavourable reports, and the failures at Frodham, there are yet those who have faith in the future success of the association.

WESTERN AFRICA MALACHITE COPPER MINES COMPANY.—An influential association has been formed for the purpose of working the rich mines of copper situated at Bembe, near Ambella, in the district of Encoge, in the province of Angola, in Western Africa. These mines have been known from remote times, and for a long period great quantities of malachite have been brought down by the natives and exchanged for European goods. The shipments of this valuable mineral, which from the reports of the natives is said to exist in large quantities, amounts to several hundred tons per annum. In the concession of the mineral deposits at Bembe, it is provided that no slave labour shall be employed, and the promoters believe this may prove an important element in the civilisation of Western Africa and the suppression of the slave trade. A fort (which is garrisoned by a detachment of 150 Portuguese soldiers, at the cost of the association) has been constructed to protect the mines. The military force was accompanied by Capt. John Tonkin and two Cornish miners, who were accompanied by a party of Portuguese. The old workings of the natives consist of large pits, or quarries, by which the vein has been opened to the surface. The lode is 45 feet wide, running south-east and north-west, underlying north, and consisting chiefly of clay and iron ore, with a small quantity of quartz. The lode has been proved by four adits, and traced to a length of 550 fathoms. Captain Tonkin values the leader of malachite on the south side of the lode at 200*l.* per fm., in the adit at 300*l.*, and in a sink 4 fms. below this level at 350*l.* With two Cornish miners and two Portuguese, assisted by native negroes, 7000 shares, equal to 30 tons, was raised, and sent to Portugal. During the first three months of the year, 340 tons of malachite were raised; of this quantity 146 tons were sold here, and realised 56*l.* per ton, the produce of copper being 50 per cent. The mines are situated on a low range of hills, about 80 or 100 miles from Ambriz, the seaport: the expense of transport is about from 3*l.* to 4*l.* per ton. An expedition left on the 14th inst. for the mines, under the superintendence of Capt. John Bray, with all the necessary tools and machinery. The consideration the vendors are to receive for the property is 50,000*l.*, to be paid out of the first deposit money. They make it a condition they shall, however, be allowed to subscribe for 700 shares, consequently there are only 300 for allotment. The proposed capital is 125,000*l.*, in 1000 shares. The deposit is fixed at 85*l.*; calls, to the amount of 5*l.* each, to be made at intervals of not less than three months. The company is under the management of Messrs. John Taylor and Sons, and from their well known practical ability, and habits of strict investigation, there is every guarantee that the enterprise will be conducted in an efficient and economical manner as circumstances require, and, probably, will be the precursor of a further development of the mineral wealth of Western Africa.

Breaking of another Wire-rope.—Fatal Accident to Two Men in a Barytes Mine.—On Wednesday night, at the Barytes (or Spar) Mine, at Middleton, near to the road from Shrewsbury to Welshpool, and just over the Shropshire border, as three men were working in the shaft's barrel of water, weighing about 4 or 4½ cwt., was raised up, and when about 30 yards from the bottom the rope broke, the barrel fell upon Henry Poole and John Hodgkins, killing the former upon the spot, and the latter surviving only about an hour. The rope, a wire one, was nearly new; its breaking strain was 4 tons; working load, 12 cwt.; but it was never used at a greater strain than 6 cwt.

Explosion of Fire-damp from Using Naked Candles in a Colliery.—At the Brandy Colliery, Rhonlanerchog, nine men were burnt and two more hurt, by an explosion of fire-damp in a new pit, caused by the rashness of the workmen, who, after blasting some coal, went into the workings with naked candles, instead of using the lamps which are provided for them by the company.

Death from Falling Down a Shaft.—At North Wheel Robert, near Horrabridge, an accident occurred on Tuesday, which terminated fatally to Thos. Chubb, a poor fatherless lad, about 14 years old. He was descending the shaft, when he slipped from the ladder, and fell a distance of 15 fms.; his head and body were severely cut, and many of the bones broken.

THE PATENT LAW, AS RECENTLY AMENDED.—No. IX.

BY F. W. CAMPBELL.

ASSIGNMENT OR TRANSFER OF PATENTS.—It will be observed that the letters patent are made out to the patentee, his executors, administrators, and assigns: whence the patent right becomes an assignable right. In law, the patent is denominated an incorporeal chattel, and may be dealt with as such. By the Act of 1852, an assignment or transfer must be registered at the Patent Office. Assignments should be effected by proper legal documents, as otherwise the intentions of the parties may not be effectuated in law.

LICENSES may be granted by the patentee, his executors, administrators, and assigns. Licenses can only be properly made by deed under seal, registered at the Patent Office. In practice, licenses are granted for a yearly rent, or a royalty or license due, of so much on each article, or on a given number of articles, with clauses requiring the keeping and verifying of accounts, &c.

LITIGATION ON PATENTS.—Patent litigation is of three kinds.—The action against the patentee to repeal the patent; the proceedings by the patentee against infringers; and the action for the penalty (under Lord Brougham's Act), for the copying of the patentee's name or mark on pirated articles. The action to repeal the patent, termed an action of *scire facias*, from the name of the writ under which the proceedings are originated, is an action in the name of the Crown against the patentee, requiring him to show why his patent should not be repealed and cancelled, as being invalid from not possessing those qualities which have been before set forth as necessary in a valid patent. This action can only be brought with the sanction of the Attorney-General, who requires, before he gives his sanction, that a good case should be made out to his satisfaction, and that the party seeking to prosecute enter into a bond (usually for 1000*l.*), conditioned to pay all the costs, charges, and expenses of the patentee, in case the patent be not adjudged to be repealed. The proceedings will be successful if it can be proved that the patent is wanting in any of those attributes which have been already treated of under the headings, "Title of the invention," "Manufacture," "Novelty," "Utility," "Patentee," "Provisional specification," and "Specification." The proceedings by the patentee against infringers may be by bill in Chancery, praying for an injunction to stop the infringement or piracy; and by writ of *certiorari* of the Act of 1852, the common law courts have power to grant injunctions. Or the proceedings may be by an action at law for damages, and then the court may grant injunction. The injunction, in the first instance, is usually a provisional matter, until the patentee has tried his action at law for damages, which he is commonly required to try and to succeed in before the injunction is rendered perpetual.—*Patent Office, Strand*.

CALIFORNIA AND ITS RESOURCES.*

From the large amount of British capital expended in California, and the gold of Englishmen deriving advantage from the extended commerce which the number of Englishmen induced, an account of the present position of that state will be read with deep interest. The precious metals are of vital importance to industry and commerce; by the gold discoveries the social condition of all classes and all countries was sensibly improved; there appears everything to justify the anticipation that ere long it will be universally acknowledged that mining enterprise generally has more influence upon the prosperity of every country than any other branch of industry. Banish mining from England, and where would be her power? How could she maintain the pre-eminence she now enjoys? And, on the other hand, introduce the English system of mining, combined with the energy and perseverance so readily observable in English miners and mine adventurers into France, Germany, or the United States, and how materially would the position of those countries be improved. In the United States, especially, there is ample room for an improved system, as minerals are abundant, and the laws all that adventurers could desire; and in Germany, although the mode of working is held up as a pattern, it cannot be denied that the English energy is not so much. Combine the science of the German in mining operations with the energy and practical skill of the Englishman, and we shall have a system which will be as near as may be to perfection.

In referring to California's present position and population, Mr. Seyd remarks that the news of the discovery, although people were at first incredulous, spread rapidly throughout the whole civilised world, and immigrants of all classes poured into the country, the majority resorting to the gold fields, where they met with various success: he then conducts us through the period of California's rising prosperity, so far as regards the value of real estate, and its decline from the falling off of immigration; and, through the proceedings of the "vigilance committees," to the present reformed condition of everything calculated to lead to permanent prosperity. Passing over this interesting chapter we come to one more within our province, in which he observes that the chief product of California is gold—a fact well known over the world. Quartz mining will be a profitable investment of labour and capital for hundreds of years, as there are indisputably thousands of leads not yet discovered, and the mines of California are capable of enriching the world for ages, being all but inexhaustible. The mines in the immediate vicinity of rivers, or where water was otherwise easily obtainable, do not yield the same quick results as at first—when it was only necessary to turn up the surface to discover a remunerative amount of gold; but they still give employment to a great body of miners, and will continue to do so for years. Everybody that works in the mines honestly and perseveringly can do well.

The Gadaden purchase offers little to the agriculturist, but much to the miner, as in mineral wealth it seems unequalled. The Tucson Silver Mines were formerly worked by Mexicans, but have lately been purchased by an American company. The Arizona Copper Mines are the richest ever discovered; there are veins of the ore, and most of it is pure metallic copper.

After referring very fully to the commerce, financial position, and agricultural resources of the country, he remarks on the prospects of the labourer, mechanic, &c., concluding with some observations upon the different routes to Australia, and the best means of getting there. The whole work gives evidence that the writer is thorough master of his subject, and will well repay the perusal by any person desirous of obtaining useful information relating to California.

PREVENTION OF STEAM-BOILER EXPLOSIONS.—The annual meeting of the Manchester Association was held on Tuesday (Mr. Hy. Houldsworth in the chair). The committee in their report stated that during the past year 3979 visits had been made, and 1592 boilers inspected. These visits had disclosed that 107 boilers, or 6½ per cent. of the whole, were in a dangerous condition; 837 indications of engines had also been taken. The balance sheet still showed a deficiency in the annual subscriptions, as compared with the expenditure. The receipts from all sources during the past year had amounted to 1855*l.* 11s. 3d.; and the expenditure to 1864*l.* 7s. 5d. The salaries of the inspectors had been increased from 104*l.* to 120*l.* per annum. Amendments had been made in the rules, providing for the periodical inspection of boilers by the chief and sub-inspectors. The committee earnestly urged upon members the absolute necessity of numbering permanently each boiler upon their works. The report of the chief inspector, Mr. R. B. Longridge, stated that the number of mills under inspection on Dec. 31 was 555, comprising 1592 boilers, and 1314 engines, representing a total of 45,186 nominal horse power. The 1592 boilers were of the following constructions: 1130 cylindrical, with internal flues; 100 cylindrical, without internal flues; 115 Galloway's; 131 multitubular; 41 multiflued; 63 Butterley; and 18 wagon. Of these, 107 were found working in a dangerous state from the following causes:—over pressure, 11; corrosion, 17; fracture of plates of angle iron, 13; malconstruction or deficiency of safety valves, 12; defective condition of safety valves, 13; ditto of water gauges, 37; injury resulting from deficiency of water, 9. In addition to the above, the following were also found defective, but not absolutely dangerous, at the time of the inspection, although the defects or injuries sustained were of a serious nature, and such as, in many instances, required early repairs:—from corrosion, 52; fracture of plates or angle iron, 16; injury from deficiency of water, 42; from defective condition of safety valves, 44; of water gauges, 11; and of pressure gauges, 16, making a total of 181. In conclusion, the inspector recommended greater attention to the laws of combustion of fuel, the obtaining more perfect circulation of the water in boilers; the admitting steam more freely to the cylinders; and, where practicable, the increasing of the degrees of expansion. The Chairman said that the increase of members had been satisfactory—the number having about doubled in two years. The necessity for such an association was strongly indicated by the fact that during the year 15 boilers had been found to be at the time of inspection in a dangerous state; for it must be remembered that the members of the association are, or represent, more than one-fourth or one-fifth of the proprietors of steam-engines in the peculiar district of the association; and, again, looking to the vast world sphere of the country generally, it would be seen that 15 of the boilers inspected being found dangerous represented a state of things—business being carried on under so much danger—that imperatively called for an extension of the operations and principles of the association. The end must be, that proprietors of steam-engines would have to consider, very definitely, whether they would have compulsory or voluntary inspection—inspection by a Government official, or by the officers of an association. So strongly were the feeling of the millowners opposed to Government interference, that when the question "as once raised he could not suppose that there was one in a hundred in favour of such a step as to boilers. The old rules were then rescinded, and a new code, calculated to better meet the requirements unanimously adopted.

PERSONS EMPLOYED ON RAILWAYS.—A parliamentary return of the number and description of persons employed on the railroads of the United Kingdom on June 30, 1857, shows that the length of line open at that period was 8942 miles (for the whole of the United Kingdom), and the total number of stations 3121; there were employed on such railroads 231 secretaries and managers, 26 treasurers, 150 engineers, 398 superintendents, 196 storekeepers, 201 cashiers and accountants, 997 inspectors or timekeepers, 3471 stationmasters, 404 ticket collectors, 136 draughtsmen, 8712 clerks, 1335 foremen, 2563 engine-drivers, 3644 assistant drivers or firemen, 8716 grooms or breakmen, 31,837 artificers, 3263 watchmen, 1998 gaiters or watchmen, 17,091 porters or messengers, 8260 platelayers, 26,283 labourers, and 2385 persons in miscellaneous ways. The number of employes on the open railroads of the United Kingdom at end of June, 1856, was 102,107, whereas the number now is 109,600. On 1393 miles of unopened railways there were employed at the end of last June 44,037 persons, so that the railway business of the empire required the services of 153,637 persons of all grades and capacities. Of these employed 116,534 were in England and Wales, 20,173 in Scotland, and 16,931 in Ireland.

Mr. W. Clay, of the Mornay Steel and Iron-Works, who created such a sensation at a meeting of the Society of Arts, on Wednesday, was specially introduced to the gathering by Sir John Lubbock, who was the first person to discover the extraordinary talent and genius of his protégé.—*Court Circular*.

* California and its Resources: a work for the Merchant, the Capitalist, and the Emigrant. By Ernest Seyd. London: Tribner and Co.

BRITISH MINES

satisfactorily.

Journal of Management Inquiry 18(6)

1940

as fast as possible. Capt. Hampton, as well as myself, thinks it advisable to change the lift, as some of the flanges of the pumps are broken, and the men are afraid to work under them. We shall commence to-morrow, and I hope in two or three days we shall be in a good position to sink the shaft to the 20 ft. level with all speed.

THE ARIZONA COPPER MINES.—In Mr. Seyd's work on "California and its Resources," referred to in another column, some very interesting information relating to these mines is given. In corroboration of the abundance of the copper ore, a traveller resident in San Francisco states that a person having occasion to dig an ordinary well for his cattle, struck at a depth of 15 ft. a vein of ore apparently of vast extent. He made an immediate experiment on it, and found it to yield 35 per cent. The same informant states that the company has a standing offer of \$250 per ton for all ore delivered at San Francisco, or an advance on its consignment to Swansea for smelting of \$200 per ton. He estimates the whole expense of working the mine, and carrying the ore down the Gila and Colorado Rivers, to the Gulf of California, and its transportation by sea to San Francisco, at the most, at \$150 per ton. The distance of the Arizona Mines, by land, to Fort Yuma, at the mouth of the Colorado, is about 100 miles; but the route from the same mines to the Gila River is only 35 miles, over which it is in contemplation to construct a plank-road. The ore will be taken by flat boats, or steamers at a later period, down the Gila, which empties into the Colorado, and thence to Fort Yuma, where regular sailing vessels can be ready to receive it. It is a fact well known by experience that the mines of the baser metals yield the most valuable practical results: no gold mine ever paid such profits as the tin mines of Cornwall. The quantity of silver existing in the Arizona ore is variously estimated, some making it as high as 3 to 5 per cent. That silver does exist in these ores is beyond a doubt, and it is confidently asserted that it will eventually prove sufficient to meet all the expenses of working the mines. The Arizona ore is of extreme richness, and the country being now under the Government of the United States the facilities for prospecting mining works there are quite equal to those of the other States. The first, the Arizona or Ajo Mine—which at the present moment answers the most sanguine expectations of the shareholders—extracts and lands the ore at San Francisco at a cost of \$75 per ton; the second, the Gadsdenian, promises also very well, but advances but slowly for want of means, the great drawback to all such undertakings in California, on account of the great value of money at San Francisco. Both these mines show an average of 70 per cent. pure copper to their ore of red oxide. The mineral wealth of the Arizona district generally will be more readily acknowledged and appreciated by inspecting a collection of specimens at the office of Mr. Seyd, who offers every information.

MINERAL WEALTH OF IRELAND.—It is proposed to work three beds of white siliceous in a seat leased to Mr. Doering, C.E., and situated in Rosellen demesne, on Cork Harbour. They run through a length of 180 perches; together, they form a breadth of about 60 ft., and practically may be said to be only one great bed, as there are intersected between them but two thin strata of inferior material. The siliceous beds are of great depth—probably over 100 feet—for 20 to 25 feet from the top are quite free from veins, and even below this depth they can be worked at a small cost for pumping. Overlying the siliceous is a bed of good brown hematite ore, averaging 6 ft. thick, about 20 acres in extent, and there are strong indications of valuable manganese. In the manufacture of porcelain and earthenware the siliceous is substituted for ground flint and Cornish stone, the two most costly ingredients in the body of whiteware. A capital of at least 10,000, is required; but with care a profit of 15 or 20 per cent. might be realised.

COMPRESSING SMALL COALS.—In order to prepare small coal, and other matters to be used as fuel, Mr. Thompson, of North Shields, has patented an invention, for a correspondent, in carrying out which the small coal and other matters are fed on to the bed or bottom of a crushing and mixing mill. The under surface of the bed or bottom of the mill is heated. Above the bed is formed an enclosed chamber, with a suitable outlet and pipe at the upper part thereof, through which the vaporized products pass, and are condensed by means of a condenser. The upper part of a vertical axis (protected from the fire by brickwork) passes into the enclosed chamber above the heated bed or bottom. The vertical axis gives motion to four or other suitable number of arms, to one of which a scraper is affixed, which moves the coal and other matters on the heated bed or bottom of the mill. The coal and other materials as they rise above the scraper fall over again on the heated bed or bottom at the back of the scraper. The other arms carry a mixing roller and crushing rollers. On one side of the enclosed chamber there is an opening through which the contents are discharged when completed, and there is a charging opening at another part of the chamber, and such openings have suitable slides or valves to close them. The coal and other material are thus heated, mixed and crushed whilst in the chamber and on the heated bed, and as such materials are delivered and heated materials fall into recesses formed on two wheels or cylinders, which revolve between two fixed plates or sides at those parts thereof where the materials descend from the hopper, and as each wheel has alternately projections and hollows, the projections of one wheel enter the hollows of the other wheel and compress the materials therein. As the wheel rotate, and the filled hollows or recesses come below the two fixed side plates, the moulded masses are forced laterally out of the hollows or recesses by two rammer or forcers, put in motion by suitable gearing, and such moulded and compressed masses are received on to two endless aprons, which convey the moulded masses away from the machine.

RAILWAY CROSSINGS.—Mr. W. E. Newton has patented an invention which consists in combining a flexible rail with a fixed rail and point on the supporting chair. The elasticity of the movable rail is made to keep it in its position, and still allows it to yield sufficiently for the flange of the wheel to pass over. The invention also consists in placing a stop opposite the point of the crossing to support the rail at that point, also in securing the point of the movable rail from rising out of place by means of a hook and rebated chair.

FORGING NAILS.—Mr. A. V. Newton, for a correspondent, has patented an invention for forging nails, which consists in the use of two anvils faces and two hammers; the anvil faces being connected by a rocking shaft. The forging is effected between hammer and anvil, and by successive blows at right angles, without the necessity of turning the article that is being forged, moreover, each blow is struck at a time when the anvil is at rest.

CASTING.—Messrs. Elce and Hartley, in the preparation of moulds, propose the application of electric force connected together and acting simultaneously on the upper box, whereby it is gradually raised until the mould is free from the pattern, and the steady pins from the holes in which they fit. The upper box when thus raised can be removed by a crane or otherwise.

LIGHTING PUBLIC LAMPS BY ELECTRICITY.—Messrs. Keogh, Temple, have patented a new system of lighting street lamps by electricity. They provide a movable wheel, with a handle for turning it, the teeth of this wheel take into a horizontal bar, which extends the length of the street, and turns on the gas taps, which are also connected with a wheel. Electric wire is carried to and from every burner, and platinum or other metal points are used for combustion.

GUNPOWDER.—Mr. F. Köhler, Finsbury-place, proposes to manufacture gunpowder by mixing a new salt (oxygen, 38.51; chlorine, 29.76; potassium, 31.73), sulphur and charcoal in the following proportions:—70 parts of the salt, 20 of the sulphur, and 10 of charcoal. In case of need it is sufficient to simply mix the ingredients together. The ingredients are not only unflammable but inexpensive.

SEPARATING IRON AND OTHER MATTERS FROM ORES.—Mr. W. A. Edwards, Denmark-road, Camberwell, provisionally specified the separation of matters attracted by the magnet by means of a cylinder, kept magnetised by a fixed coil of wire connected with a battery. The pulverised ore is introduced by a hopper, and the unattracted matter falls, whilst the remainder is brushed off into a suitable receptacle.

HOT-BLAST STOVE.—Messrs. Levick and James, of the Cwm Celyn and Blaithwaith works, propose to pass the air to be heated through a system of serpentine pipes, enclosed in a chamber having an opening to the atmosphere. These pipes have projections at one end, and which rest on brackets bolted to certain of the plates which form the outer lining of the furnace, and thus suspended the pipes are free to be lifted off their bearings without disturbing the surrounding brickwork.

ASCENDING INCLINES ON RAILWAYS.—Mr. Thos. Grahame, Upper Seymour-street, to facilitate the passage of carriages on inclines of railways, proposes that on the upper level of each incline of a railway, and not far from the top of the incline, there shall be arranged an apparatus for fixing a locomotive engine to the line of way, together with a suitable barrel, or winding on of wire-rope. The engines of the locomotives which run on such lines of railway are also arranged to be put into gear with such barrel or windlass, in order to give motion thereto, and to wind the wire-rope on or off the barrel or windlass as required, according as a train is about to be raised up or run down an incline. By this arrangement the fixed engines heretofore used on railways to give motion to suitable barrels or windlasses near inclines will be dispensed with, and at the same time the locomotive engines employed on lines of railway having very steep inclines will not require to be so powerful, as was the case if they were running up inclines, and had also to drag up like weights of trains. It may be remarked that a windlass or barrel may be carried by each locomotive engine, in place of having one fixed at the upper level of each incline, but it is preferred to employ the arrangement described.

RAILWAY TRAFFIC.—The Traffic Returns of the Railways in the United Kingdom for the week ending Jan. 23, amounted to 933,821, and for the corresponding week of 1887 to 400,090, showing a decrease of 533,731. The gross receipts of the eight railways having their terminal in the metropolis amounted for the week ending as above to 164,611; and for the corresponding week of last year to 165,795, showing an increase of 816.

The increase on the Great Northern amounted to 22,001; on the Great Western, to 21,811; on the London and Blackwall, to 231; on the London, Brighton, and South Coast, to 991; on the London and South-Western, to 8171; and on the South-Eastern, to 6151; total, 49,921. But from this must be deducted 4,534, the decrease on the Eastern Counties, and 44,811 on the London and North-Western; together, 51,345; leaving the increase as above, 816.

The receipts on the other lines in the United Kingdom amounted to 228,751, and for the corresponding period of 1887 to 236,395, showing a decrease of 7,644. In the receipts of those lines, from which must be deducted the increase on the metropolitan lines, leaving the total decrease 67,281, compared with the corresponding week of 1887.

At the Geological Society, on Feb. 3, a paper will be read by Sir R. I. Murchison, F.R.S., V.P.G.S., on a New View of the whole Succession of Rocks in the Northern Highlands, from the Oldest Gneiss through Strata of Cambrian and Lower Silurian Age to the Old Red Sandstone, inclusive.

Mr. J. Davis has been appointed official manager of the Dhurood Copper Mining Company, which is now being wound-up in the Court of Chancery. The settlement of the list of contributors is to be proceeded with on Feb. 5, by which day creditors are required to prove their claims.

Advices from Australia to Dec. 15 state that a staff of Prussian mining engineers are making a tour through the mining districts of the colony.

THE FIRST EMINENT ENGLISH ENGINEER.—The only Englishman who had at all distinguished himself down to the middle of the century was John Perry, who succeeded in a steam engine branch of the Transatlantic Dugham Bank; but his abilities found so little scope at home that he emigrated to Russia, and entered into the service of Peter the Great, then engaged, with his army, in entering a canal between the Neva and the Volga. Perry styled himself "adventurer," which was the term then applied to those who undertook hazardous engineering enterprises; and the word is still in use amongst the Cornish miners. *Quarterly Review.*

* With next week's Journal we shall give a SUPPLEMENTAL SHEET, in which several interesting papers will appear—the Drainage of Mines by Levels and Machinery, by Mr. Mark Fryar, of the Bristol Mining School—Ore and Ironstone, by Roadside Abbey, by Mr. Jos. Bewick—Transatlantic Telegraph—Self-Acting Trap-Doors—Nickel and Copper Mines of Pennsylvania—Mine Machinery—Rotating Buddles.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET, London, January 29, 1888.

COPPER.			BRASS.		
Copper wire	per lb.	11 1/4-13 1/4	Sheets	per lb.	12 1/2-13 1/4
ditto tubes	per lb.	11 1/4-12 1/2	Wire	per lb.	11 1/4-12 1/2
Sheeting and bolts	per lb.	11 1/4-12 1/2	Tubes	per lb.	11 1/4-12 1/2
Bottoms	per lb.	11 1/4-12 1/2	FOREIGN STEEL.		
Old (Exchange)	per lb.	11 1/4-12 1/2	Swedish, in kegs (rolled)	per lb.	11 1/4-12 1/2
Best selected	per lb.	11 1/4-12 1/2	do. arrive (hammered)	per lb.	11 1/4-12 1/2
Tough cake	per lb.	11 1/4-12 1/2	ditto, in faggots	per lb.	11 1/4-12 1/2
File	per lb.	11 1/4-12 1/2	English, spring	per lb.	11 1/4-12 1/2
South American	per lb.	11 1/4-12 1/2	QUICKSILVER	per lb.	11 1/4-12 1/2
IRON.			SILVER.		
Bars, Welsh, in London	per ton.	7 10 0-8 0 0	Foreign	per ton.	25 15 0-27 0 0
ditto, to arrive	per ton.	7 5 0-8 0 0	To arrive	per ton.	(nom.)
Nail rods	per ton.	8 0 0-9 0 0	ZINC.		
Stafford, in London	per ton.	8 0 0-9 0 0	In sheets	per ton.	34 0 0-35 0 0
Bars	per ton.	8 15 0-10 0 0	TIN.		
Hoops	per ton.	10 0 0-10 10 0	English, blocks	per ton.	118 0 0-120 0 0
Sheet, single	per ton.	10 0 0-10 10 0	ditto, Bars (in barrels)	per ton.	118 0 0-120 0 0
Pig, No. 1, in Wales	per ton.	3 15 0-4 15 0	ditto, Rolled	per ton.	118 0 0-120 0 0
Refined metal, ditto	per ton.	4 10 0-5 10 0	Banca	per ton.	118 0 0-120 0 0
Bars, common, ditto	per ton.	6 7 6-8 10 0	ditto	per ton.	118 0 0-120 0 0
ditto, railway, ditto	per ton.	6 10 0-8 15 0	Strails	per ton.	118 0 0-120 0 0
ditto, Swed. in Lon.	per ton.	14 0 0-14 10 0	STEEL-PLATES.		
In stock to arrive	per ton.	2 15 0-2 10 0	IC Charcoal, 1st quality	per ton.	1 13 6-1 15 6
Pig, No. 1, in Clyde	per ton.	2 15 0-3 0 0	IC Ditto 1st quality	per ton.	1 13 6-1 15 6
ditto, in Tyne and Wear	per ton.	2 15 0-3 0 0	IC Ditto 2d quality	per ton.	1 13 6-1 15 6
ditto, forge	per ton.	2 15 0-3 0 0	IC Ditto 3d quality	per ton.	1 13 6-1 15 6
Staffordshire Forge Pig	per ton.	4 10 0-5 10 0	IC Coke	per ton.	1 7 6-1 8 6
Welsh Forge Pig	per ton.	3 0 0-3 5 0	IC Ditto	per ton.	1 13 6-1 15 6
LEAD.			Canada plates	per ton.	15 0 0-15 5 0
English Pig	per ton.	23 5 0-23 10 0	In London; 30s. less at the works.		
ditto sheet	per ton.	23 0 0-	Yellow Metal Sheathing	per lb.	101
ditto rod	per ton.	24 10 0-24 15 0	Wetterstedt's Pat. Met.	per lb.	2 2 0
ditto white	per ton.	27 0 0-30 0 0	Indian Charcoal Pig	per lb.	7 10 0
ditto patent shot	per ton.	25 15 0-28 0 0	London		
Spanish, in bond	per ton.	23 0 0-	At the works, 1s. to 1s. 6d. per box less.		
American	per ton.	23 0 0-			

REMARKS.—Our market continues to wear a steady appearance, and prices of many metals have greatly improved. Business from day to day is gradually increasing, being materially assisted by the reduced value of money. Sellers begin to evince more confidence in purchasers, and the usual amount of credit is again becoming general, although necessary caution is in a great measure exercised.

COPPER.—On Jan. 26 the smelters announced a rise of 9d. 10s. per ton on cake, tile, and ingots, and 1d. per lb. on manufactured sheet and sheathing; also 1d. per lb. on yellow metal. According to the standard, which had risen at the two previous ticketings in all about 10d. 10s., some alteration in manufactured descriptions appeared imperative, so the smelters, with the least possible delay, agreed to alter fixed rates, which took some merchants a little by surprise, as the demand, although tolerably good, was not so great as to lead the trade to expect any immediate change in current prices; however, the advance seems rather to have created increased enquiries, and hastened dealers to put in hand considerable orders, fearing lest another rise should take place ere long; and we think buyers will not do amiss by executing all the orders they have on their books, or even purchase in anticipation of their requirements, as the tendency of this metal is doubtless in favour of higher quotations. The smelters are somewhat indifferent about taking further contracts: 1004 tons of ore are advertised for sale at Swansea on Feb. 9.

IRON.—In the various descriptions of iron no alteration has occurred, excepting Scotch pigs, which have slightly receded, mixed numbers being now quoted about 2s. per ton under our last quotation. In rails there is a very fair enquiry, and makers are enabled to command present prices without difficulty. English bars are still quoted the same as this day week's quotation; the demand has been moderately brisk, and for first quality bars certain makers require 7d. per ton at the works, being an advance of 10s. per ton. This is the highest price quoted, and besides the favourite Welsh brand we have heard of no such price being paid for any other quality. The ruling quotation is 6d. 10s., f.o.b. at the works. Staffordshire bars, hoops, sheets, and nail rods are only in moderate request; prices have not undergone any change, and the market altogether assumes a quiet but steady appearance. The prospects of the market are good, and no fear is entertained of prices receding; on the contrary, the market is not unlikely to improve shortly.

LEAD.—This article is in better favour, and smelters are obtaining rather better prices. The market closes firm at 22d. 5s. for English pig, and 23d. for sheet. Spanish held for higher prices.

SILVER.—There have been a few sales at 26d. 15s., and small lots at 27d. Holders are firm, and will not quote under 27d. for parcels of 25 to 50 tons.

TIN.—On Jan. 26 the smelters raised the price of English block, bar, and refined 5d. per ton, making present prices as per annexed list. Since the rise foreign has further improved, and it is not improbable there may yet be a manifest change in prices. Holders are not at all anxious to realise, although stocks have not much diminished. Banca has also risen, the advices from Amsterdam being of a favourable character.

TIN-PLATES.—A few common brands only can be bought at 27s. to 27s. 6d.; better brands at 28s. 6d. per box; best brands, 29s. to 30s. per box, 10 cokes.

STEEL.—A few hundred kegs of Swedish may be had at 22d. to 22d. 5s.

LIVERPOOL, JAN. 28.—Transactions in Iron since our last report have been limited, prices remaining without alteration, but at the same time showing a tendency rather to weakness than otherwise. Exports continue to be on a moderate scale, and dealers for the most part supply themselves merely for immediate requirements, apparently not having sufficient confidence in the market to warrant purchases to any extent for forward delivery. Scotch Pig-Iron still shows a downward movement, prices being 6d. to 1s. per ton lower than they were on this day week, notwithstanding the shipments are again in excess, being 8685 tons for the past week, against 7737 tons for the corresponding week of last year. Speculators appear to be rather disposed to fight shy of the article at present, even at the comparatively favourable prices now ruling, and the demand for exports is but small. A further advance of 5d. per ton in the price of English Tin was announced on Tuesday last, and on the same day the price of copper was raised 1d. per lb. on manufactured, and 9d. 10s. per ton on unmanufactured. The second advance in the price of Tin was scarcely expected so soon after the first rise, and as regards copper the alteration was more unexpected still. Tin-plates are firmer, with a fair business done; best brands command full rates, and makers are not anxious sellers. An improved feeling is observable in Lead, and prices are stiffening. The reduction in the Bank of England rate to 4 per cent., announced to-day, although confidently expected, will doubtless assist materially to strengthen the position of metals, and give confidence in the now being in a healthy state. The following are the quotations:—Iron: Merchant bar, 7d. to 7d. 10s. per ton.—Tin: Common block, 118s. per ton; common bar, 119s.; refined block, 121s.—Tin-plates: Charcoal, 10, 33s. to 33s. 6d. per box; coke, 10, 27s. 6d. to 28s. 6d.—Lead: English sheet, 23s. 10s. to 24s. per ton; English pig, 22d. 10s. to 23d.—Copper: Cake and tile, 117d. per ton; best selected, 120d. per ton; sheathing and bolt, 1s. 1d. per lb.—Yellow metal sheathing, 11d. per lb.—Steel: Blistered, 30s. to 40s. per ton; spring, 18s. to 24s.; cast and shear, 50s. to 60s.

PARIS, JAN. 28.—A sensible, although not extensive, improvement has taken place in the metal market. Some orders for refinery pigs have been given, and infinitely more business has been done since the beginning of the year than during the whole month of December. Here are the official prices per ton on Jan. 21.—At St. Dizier, for pigs, 64. 4s. 2d.; pigs for second melting, No. 1, 64. 16s. 8d.; ditto, No. 2, 64. 8s. 4d. Charcoal rolls, in any of the Eastern Railway stations, 12s. 6d. to 13s. 8s. 4d. Nail rods, No. 21 and above, 14s. to 14s. 8s. 4d.; ditto, No. 20, 15s. 4s. 2d. Forged iron, at stations nearest the works, 14s. 16s. 8d.; axles, from 15s. 12s. 6d. to 17s. 12s. 6d., according to weight; plates, 90 to 108 millimetres, 16s. 16s. 8d.; and smith iron, 16s. 12s. 6d. Castings, smooth and figured plates, 7s. 16s. 8d.; water-pipes, 12s. 4s. 2d. to 10s. 8s. 4d.; joints and curves, 10s. 8s. 4d. to 10s. 16s. 8d.; spouts, 10s. to 10s. 12s. 6d.; fur-

nace bars, 11s. 4s. 2d. to 11s. 12s. 6d.; nails, from 18s. to 30s., according to the number. Copper—Russian, 120s. to 132s., according to brand; Ohm, 104s.; Lake Superior, from 110s. to 112s.; Corocoro, 116s. Tin—Strait, 116s.; Banca, 124s. Lead, 24s.; sheets, 28s. Spelter, 26s.; castings, 91s. 8d. to 120s.; bars, from 8s. to 9s. 12s. 6d. Iron ore sells readily if rich, and at good prices. Coals are rather flat, owing probably to the mildness of the season until lately, and to the difficulty of procuring carriage. The quantity in stock is stated to be enormous.

NEW YORK, JAN. 13.—The market has not yet recovered from its state of lethargy, and prices for most descriptions of iron are merely nominal. Scotch pig sells slowly at \$26 to \$27, six months, and \$23 to \$24 cash, for prime American brands. Common and refined English bars are quite dull, and prices altogether nominal. English sheet is quiet at 3c. to 4c. for singles, doubles, and triples. Of wrought scrap 170 tons sold, at \$20 cash.

A fresh impetus has been given to the MINING MARKET this week by the rise in copper and tin, and the demand for shares has been almost unprecedented. This we foretold some weeks ago, when the market was unduly depressed, and it was evident a reaction was near at hand. In addition to the improved tone given to the market by the rise in metals, money is daily getting cheaper and more abundant, with greatly restricted means for employing it. The funds are considered too high, banks are not in favour, and as there are no gold mining companies on the Stock Exchange now to foster speculation, and end in the ruin caused by the late mania in them, the attention of its members is properly turned to bona fide English mines; thus, a daily increasing demand is springing up, which must have its effect on prices, and render it difficult to obtain shares in mines limited to a small number. Another effect of this demand will soon be evident; we shall have a host of new mining companies, with tempting baits for speculators, and it behoves, therefore, every agent who has the welfare of legitimate mining at heart to look well into the merits of all new undertakings they report upon; and it will also be well for the public to make proper enquiries before being led away by captivating addresses. We shall endeavour to call attention from time to time to those dividend and progressive mines which may be considered, from the best practical opinions, likely to improve in intrinsic value, as well as rise in market price, so that those unacquainted with mining operations may have some guide to their investments.

At the present moment, the state of mining generally denotes a rise in most descriptions of stock, but more particularly in the following:—Dividend: Basset, Buller, Grambler, Rosewarne, Great South Tolgus, Devon Consols, Margaret, Herodfoot, St. Day United, Trelawny, South Caradon, Tincroft, West Basset, and Providence Mines. In progressive, North Frances, Margery, Tamar Consols, East Basset, West Frances, East Trevelyan, Pendean, and Wheal Grenville. In low priced speculations, many of which have been greatly depressed, in some cases owing to heavy calls for machinery, &c., but which now offer good chances of success and an early rise in price, the following are considered of promise:—Hender, Venton, West Par, East Tamar, Great Badden, Redmoor, West Grenville, Castell, Wheal Harriett, &c. We may next week enlarge upon this list, and those now selected are chosen with no invidious feeling, but merely to call public attention to the first of a series of bona fide undertakings being legitimately carried out.

Rosewarne shares have been in demand, at 21 to 25; the mine is improving in the western ground, and it is hoped will be in the Dividend List again this year; the present price is 100s. less than shares were at a year or more ago. Grambler and St. Aubyn shares have advanced to 100, buyers; Basset, 190 to 200; South Basset, 7 to 7 1/2. Wheal Margery shares have been in good demand, at 7 1/2 to 8 1/2, leaving off at 8 to 8 1/2; the meeting a call of 8s. per share was made, and the report of the mine holds out good prospects; one feature in the accounts deserves especial notice, as an act of liberality on the part of the lord worthy of imitation—he has given up, in order to assist and encourage the adventurers. West Frances shares have advanced to 20, 21, and several buyers; Wheal Harriett, 10s. Herodfoot shares have been in request, at 7 1/2 to 8; at the meeting, the profits were 561l. 0s. 3d.; and the assets over liabilities, 1319l. 8s. 9d.; a dividend of 12s. 6d. per share was declared, the prospects for the future being equally good. South Tolgus shares have been enquired after, at 140 to 150; no dividend was declared at the meeting, but the mine looks well. Pendean have been much sought after, at 4 to 4 1/2, and the mine becoming a favourite; Tolvaddens have been more freely offered, at 6 to 6 1/2; Grenville have been in considerable request, at 1 1/2 to 1 1/2. Redmoor, 1/2 to 1/2; at this mine, during the preliminary works, we understand 18 tons of lead (12 tons worth upwards of 20l. per ton) have been raised, and the new drawing engine will go to work in a fortnight, to explore and open out the copper lodes. East Tamar, 3/2 to 3/2; East Gunnis Lake, 1 1/2; Venton, 1/2 to 1/2; Wheal Hender, 2 1/2 to 3; West Trevelyan, 3/2 to 3/2; Lady Bertha, 21s. 6d. to 22s. 6d. Wheal Trelawny have been largely dealt in, at 24 1/2 to 25, ex div., but leave off rather flatter; at the meeting, on Monday, the accounts showed a profit on the quarter of 2745l. 11s. 8d., and a dividend and bonus of 2d. per share was declared, carrying over 1485l. 10s. to credit of next account; the ends, the most important feature in the mine, look well; the slopes are not so productive, but are expected to improve. Wheal Edward, 7 1/2 to 7 1/2. Sortridge Consols, 1 1/2 to 1 1/2; at the meeting, a dividend of 1s. 6d. per share was declared. Wheal Kitty (Lelant) shares have been dealt in to some extent, at 1 1/2 to 1 1/2; Wheal Margaret shares have advanced to 57 1/2, 60, and in request; Alfred Consols advanced from 13 to 14, 14 1/2; Great Alfred, 4 1/2 to 4 1/2; Wheal Mary Ann have been flatter, and offered at 46 to 47; Cwm Erbin, 8 to 8 1/2; East Basset, 95 to 97 1/2. South Frances shares early in the week were particularly flat, at 180 to 185, and from the number of shares offered, chiefly from the country, it was supposed that a further decline would take place; but on Thursday notice was received of an improvement in the 104, and this, coupled with the rise in copper, caused a reaction, and shares advanced from 187 1/2 to 195, and leave off at 210, showing how suddenly at times markets change, to disappoint those who sell and exalt those who purchase; could the lawsuit with West Basset be amicably settled, we doubt not that shares would further improve. Cwm Sebon, 1 1/2 to 1 1/2; Nantow and Penrhyn, 1 1/2 to 1 1/2; West Par, 3/2 to 3/2; West Basset, 25s. ex div.; North Basset, 15s.; Tincroft, 4 to 4 1/2; St. Day United, 1 to 1 1/2; Vale of Towy, 1/2 to 1. Tamar Consols, 1 to 1 1/2; this mine is said to be making 100l. per month profit now, with improving prospects. South Caradon, 355 to 365; the dividend here was 8s. per share. West Caradon, 110; no dividend declared at the meeting, but the mine is looking favourable, and the rise in copper leads to the expectation of a dividend the account after next. Craddock Moor, 37 1/2 to 40, and rather enquired after; Hingston Down, 3 1/2 to 3 1/2; Bedford United, 6 1/2; West Damsel, 90; East Buller, 2 1/2 to 3; Par Consols, 19; East Alfred, 2 1/2 to 2 1/2; Wheal Kitty (St. Agnes), 3 1/2 to 3 1/2; Bullers have advanced to 320, 350; North Roskeer, 22 1/2 to 25; West Grenville, 4s. 6d. to 5s.; Kelly Bray, 1 1/2 to 2; Devon Great Consols shares have advanced from 425 to 440.

Mining Exchange Official List of transactions during the week:—

SATURDAY, JAN. 23.—Ding Dong, 15 1/2 to 16 1/2; Lady Bertha, 20s. to 21s.; Pedn-ar-dra, 9s. to 9s. 6d.; Pendean, 3 1/2 to 3 1/2; South Frances, 185 to 190; South Tolgus, 150; Tincroft, 3 1/2; Virtuous Lady and Bedford, 1 1/2 to 1 1/2; Vale of Towy, 1/2 to 1 1/2; Wheal Edward, 7 1/2 to 7 1/2; Wheal Trelawny, 27.

MONDAY.—East Basset, 95 to 97 1/2; Pendean Consols, 25s. 3 1/2, 4. **TUESDAY.**—Great Alfred, 4 1/2 to 4 1/2; Redmoor, 7s. 6d. to 10s. 6d.; West Basset, 25 to 25 1/2; Wheal Harriett, 10s. 3 1/2; Wheal Trelawny, 26s. 26 1/2, 27 1/2.

WEDNESDAY.—Alfred Consols, 13 1/2 to 14; East Basset, 95 to 97 1/2; Lady Bertha, 21s. 6d. to 22s. 6d.; Pendean, 3 1/2 to 3 1/2; Wheal Kitty (Lelant), 1 1/2 to 1 1/2.

THURSDAY

Arrach: 50, 48, 33, 22, 21, 20, 5, 3, 2, 1—Laxey 58, 56—Walwich Bay 58—Almeria 3—Bampfyde 17—Springbok 12.—Total, 1004 tons.

THE PROGRESS OF MINING IN 1856.
BEING THE THIRTEENTH ANNUAL REVIEW.
By J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1845), *Geology among Mines and Minerals*, &c.
The THIRTEENTH ANNUAL REVIEW of MINING Progress appeared in a SUPPLEMENTAL SHEET to the MINING JOURNAL of Jan. 3, 1857.
A FEW COPIES OF THE REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Per Centage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also, a FEW COPIES OF THE REVIEW OF 1852, 1853, and 1854, MAY BE HAD ON APPLICATION at Messrs. WATSON and CUELL'S Mining Office, 1, St. Michael's-alley, Cornhill, London.
Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

WATSON AND CUELL'S MINING CIRCULAR,
published every Thursday morning, price 6d., or 1s. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to Investors and Speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CUELL, 1, St. Michael's-alley, Cornhill.
N.B. Looking at the causes for the present depression in mining shares, Messrs. Watson and Cuell have made a selection of a few dividend and progressive mines to pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

INVESTMENTS IN BRITISH MINES.—Mr. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER and the YEAR ENDING 31st of December, 1857, with Particulars of the principal Dividend and Progressive Mines, Table of the Dividends Paid in the last Three Years, &c., with a MAP of the PAR CONSOLES MINING DISTRICT, is now ready, price One Shilling, at 117, Bishopsgate-street Within, London.
Reliable information and advice will at any time be given on application.

Also, COPIES OF "BRITISH MINES CONSIDERED AS AN INVESTMENT." By J. H. MURCHISON, Esq., F.G.S., F.S.S. Pp. 356, boards, price 2s. 6d., by post 3s. See advertisement in another column.

Just published, demy 8vo., with Twenty Illustrations on Copper, price 1s. 5s., an **ELEMENTARY TREATISE ON IRON METALLURGY,** UP TO THE MANUFACTURE OF PUDDLED BARS.
Built upon the Atomic System of Philosophy, the Elements operated upon being Estimated according to Dr. Wollaston's Hydrogen Scale of Equivalents. Comprising Suggestions relative to Important Improvements in the Manufacture of Iron and Steel, and the Conduct of extensive Ironworks.
WITH ANALYTICAL TABLES OF IRON-MAKING MATERIALS.
By SAMUEL BALDWIN ROGERS, of Nant-y-Glo, Monmouthshire.

"I do not hesitate to say Mr. Rogers's work is the most complete combination of sound science and sound practice that has yet appeared on Iron—beyond comparison."—DAVID MURPHY.
London: *Mining Journal* office, 26, Fleet-street.

Just published, price 6d., a **NEW GUIDE TO THE IRON TRADE;** OR, MILL MANAGERS AND STOCK TAKERS' ASSISTANT.
Comprising a Series of New and Comprehensive Tables, practically arranged, to show at one view the Weight of Iron required to produce Boiler-Plates, Sheet-Iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron, of any dimensions. To which is added, a variety of Tables for the convenience of Merchants.
By JAMES ROSE, Batman's Hill Ironworks, Bradley, near Bilston.
London: *Mining Journal* office, 26, Fleet-street; and sold by all booksellers.

NEW VOLUME.—RECENTLY PUBLISHED.
Royal 8vo., half calf, with Numerous Illustrations, price 21s. per volume.
TRANSACTIONS OF THE NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS.
FIVE VOLUMES OF THE TRANSACTIONS OF THIS SOCIETY are NOW READY, and comprise a series of most important and highly valuable papers, read by Members of the Institute; Illustrated with Lithographed Plans, Diagrams, Sections, &c.
Vol. V. comprises papers by Mr. Potter, on *Mining*; Mr. Wood (President), on *Limestone*; Mr. Marley, on the *Cleveland Ironstone* (an exceedingly valuable paper); &c. This is probably the most valuable volume which has yet appeared.
London: Published for the Institution at the *Mining Journal* office, No. 26, Fleet-street, London, where the volumes can be had, together or separate.

COMPULSORY REGISTRATION OF JOINT-STOCK COMPANIES.
Now ready, price 4s., the Second Edition of **TAPPING'S EXPOSITION OF THE JOINT-STOCK COMPANIES ACTS OF 1856 AND 1857.**
Designed as a PRACTICAL GUIDE for the Promoters, Directors, Shareholders, Solicitors, Secretaries, Officers, and Creditors of all kinds of Joint-Stock Companies. Containing a Clear Exposition of the recently passed JOINT-STOCK COMPANIES ACT, 1857.
Also, full Directions for the Formation, Registration, and Incorporation, of Joint-Stock Companies, together with the Authorised Regulations for Management of the same, and all necessary forms.
By THOMAS TAPPING, Esq., Barrister-at-Law.
Author of the "Readwin Prize Essay on the Cost-Book System," &c., &c.
London: *Mining Journal* office, 26, Fleet-street; and all booksellers.

PATENTS, SEVERAL THOUSAND: A CLASSIFIED CATALOGUE OF SUBJECTS; with "ADVICE TO INVENTORS ON PATENTS, CAPITAL, AND CONTRACTS."
Post free.
H. DIRCKS, C.E., Patent Agency Office (Established 20 years), 32, Moorgate-street, City.
Now ready, New Edition for 1858, with all the Indian and Crimean officers.
M.R. DOD'S PEEPAGE, BARONETAGE, KNIGHTAGE, &c.,
FOR 1858 (Eighteenth Year).
Includes the New Peers, Baronets, and Knights, with all the latest changes.
Price 10s. 6d.
Whittaker and Co., Ave Maria-lane, London; and all booksellers.

THE SHAREHOLDERS' LEGAL GUIDE
WILL BE PUBLISHED ON THURSDAY NEXT, the 4th February, price Five Shillings, which shows the EXACT LIABILITY of every SHAREHOLDER in any company.
CONTENTS.
Ch. 1. Companies in general. Ch. 7. Cemeteries. Ch. 14. Mines.
2. Railways. 8. Canal. 15. Sharebrokers.
3. Dock. 9. Chartered. 16. Transfers.
4. Water-works. 10. Registered. 17. Stamps.
5. Gas. 11. Insurance. 18. Shares.
6. Market. 12. Banks. 19. Conclusion.
7. Limited. Epilogue. Appendix.
By THOMAS HUGH MARSHAM, Esq., M.A., Barrister-at-Law, of the Inner Temple.
London: Andrew Robertson, 30, Chancery-lane.
Sent free on receipt of 5s. in stamps.

Notices to Correspondents.

* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

REDUCTION OF MANGANESE.—It would appear that Mr. David Mushet, in your Journal of last week, wishes to infer that there is no novelty in his brother's invention, as Heath used metallic manganese, since he (Mr. D. Mushet) asserts that Heath's carbide "was a most substantial piece of metal;" but I think few could suppose that the metal described by Morelet, and the carbide which Mr. Mushet saw, were similar. As to your recent correspondence, I may add that the sample I have seen at your office, and which is described by "S.C." as metallic manganese, is to all appearance the carbide; and Mr. Mushet would find that his remarks on Heath's carbide would apply to the metallic manganese of "S.C." I contend that Mr. B. Mushet's use of metallic manganese is a novelty, and that the difficulty of obtaining it at a price which will admit of its practical application is much greater than he supposes.—F. F.

COAL WEAR LONDON.—Can any of your readers tell me what has become of the coal seekers at Woking? It is now more than a year since we were promised great things, and quite soon.—METROPOLITAN.

MINERALOGY AT THE BRITISH MUSEUM.—Mr. Neville Story Maskelyne having been appointed curator of the mineralogical collection of the British Museum, it is but right the public should be informed upon what ground the appointment has been made. Has Mr. Maskelyne ever distinguished himself as a mineralogist—has he ever written a work on mineralogy? Where has he obtained his knowledge of minerals? When poor Dr. Buckland became unfit for his office, he was certainly made Reader at Oxford, but that was understood to be because he was an Oxford man. I trust there has been no jobbing—no undue influence exercised—no worthy and accomplished expert passed over.—MINER.

LEWIS HILL RANGE GOLD MINING COMPANY.—The only sign of vitality ever shown by this company was the issuing of a prospectus, which stated that, in addition to their other wealth, they possessed rubies, emeralds, &c. They had an establishment in Cornhill; but although repeatedly called upon, the secretary could never be met at the office; no meetings were ever held, and no statements were at any time issued by the promoters or any of the directors. The other companies mentioned never came to maturity, and were connected at a period when speculation was rife, and people who indulged in golden dreams of riches imagined that they could, by investing a little capital in any undertaking, suddenly become rich.

LEGITIMATE SPECULATION.—Already there are rumours that many speculative "bale" are to be launched so soon as the market is ripe to receive them. You, Sir, in your columns have constantly warned the public against many delusive schemes that have been brought forward; the "snake has, however, only been scotched, not killed." Those who are about to embark in any undertaking should be careful to ascertain not only the character, but likewise the ability, of those who are on the committee of management, as well as the practical knowledge of the agent who has the superintendence of the mine. Above all, let them not trust the reports of those semi-scientific individuals, who, under the disguise of a frank bearing and a rough and ready air, are the means of introducing so many questionable projects to the public. Those about to invest their capital in a mine ought to be aware that machinery is not alone sufficient to make a good mine, but that to ensure a profitable result much dead ground must be worked away, and that months must elapse, and in most instances heavy calls be incurred, before returns can be made, so as to ensure a dividend. If they find they have a good mine, let them not lose heart at a little temporary failure, but make up their minds to work with economy, spirit, and perseverance. When properly conducted, mining is a legitimate enterprise; but, unfortunately, it has been made by designing individuals what it is, so often termed merely an adventure.—AGENT: Cornwall.

MINING SHARE DEALING.—A correspondent of the *Weekly Dispatch* complains that the promoters of a certain mining company, the name of which he does not mention, attempted to sell his friends into purchasing shares in a bubble association to the amount of 400l. Immediately after the money was obtained all operations were brought to a close. We should not have noticed this unless the writer had added that these people had still sufficient influence to keep the shares quoted at a premium in the *Mining Journal*. Had the author of this communication applied here, we should have felt it our duty to have instituted enquiries as to the mine and the truth of the statement; as it is, we emphatically deny that any persons have the influence either to place inflated prices on shares, or to make the share List as correct as possible; but we cannot, in every instance, guard against any delusive information which may have been afforded by deceptive purposes. Under all circumstances, any false rumour which may arise as to the value of shares is to be paid to contradict, and strive to render the Journal a faithful record of mining intelligence.

THE IRON TRADE.—"G.B." (Seaham).—When Welsh bars are quoted in London, it means that the sale is made from the stock on the wharves in Thames-street. Bars sold to arrive are usually larger quantities, and are sent direct from the works to London, and transhipped immediately. By this course the seller avoids the expense of warehousing, and can, therefore, sell cheaper.

SLATE QUANTITIES AND THEIR MANAGEMENT.—A correspondent from Carmarthen states that "Bize Vein" must be greatly in error, and very ignorant of the slate quarries in North and South Wales, in assuming that the managers of the slate quarries in North and South Wales, owing to private influences, incompetent persons are appointed, but that this is only the exception, and by no means the rule. He, as well as several other correspondents, wishes to see Mr. Richard Thomas's communication, as to where the best slates are to be found.

GRANT WHARF FOR UNITED MINES.—"A Subscriber" (Paris).—The next ordinary general meeting will be held in March, and it is not expected that a public one will be called before that time, although, as we stated last week, the committee of investigation will confer with the present committee of management as to future operations.

QUARTZ REDUCTION COMPANY.—I was an original shareholder in the Agna Fria, and was induced to merge my interest in this undertaking. I am told the directors intend calling a meeting in the ensuing month. I would suggest that, previous to such taking place, some report should be issued to the shareholders, informing us what progress Mr. Attwood has made during the last 12 months. We should then be prepared for any resolution the board might bring forward, and if such a step were adopted I am convinced it would have this good result—we should have a full meeting, instead of a gathering of the nominees of the directors.—INQUIRITOR.

TRANSATLANTIC TELEGRAPH.—"Edair" (Paris).—We were glad to hear from an old friend, and shall have pleasure in publishing the communications referred to.
WHARF SAMSON.—In your Notice to Correspondents of last week, "Subscriber" alludes to gross mismanagement of this mine, and in which I most fully concur. That there is an under-current no one interested can now, I think, deny, or why should the mine be kept in abeyance, after the splendid results of Mr. Godeffroy's experiments? That there is great dissatisfaction and grave suspicion existing in the minds of the shareholders, a short time will fully bring to light.—SCRIBITOR.

MOUNT CARBON COMPANY.—Some years since I was induced to invest a little capital in this property, believing that it only required proper management in order to develop its resources. I had since that period there have been several changes in the direction at home and the management abroad, and all that I can glean is that unless further capital is advanced it will be useless to prosecute the undertaking. Mr. Francis Renchou, of Administrative Reform notoriety, was one of our directors, and it was believed that his name would be a tower of strength; unfortunately, however, he succumbed in the crisis of last autumn, and at the present time there is no direction, but merely a committee of investigation. I would suggest that a meeting should be called, and that either we should take some steps to develop the property, or finally wind it up. As we have working men in the direction, and the money not frittered away as heretofore, in bringing a board from all parts of the kingdom, and paying their expenses to meet in the metropolis, there to discuss questions and determine business the details of which they were totally unacquainted with.—S.: *Marycloch*.

EAST WHARF RASSET.—I have just had a prospectus put into my hands of a mine called the East Wharf Rasset, in the parish of St. Endor, Cornwall. The prospectus of the mine, and the report of the captain (James Michel), is of very great promise, and guaranteeing to the shareholders for 7000l. to put up a 60 in. engine, provide all pitwork, sink shaft, drive levels, and raise 50 tons of tin, for that sum, and then to return 300l. per month profit. I hope some correspondent who knows the ground will give their opinion on this statement.—VERITAS.

PENBRECK AND EAST CLUNIAN MINES.—"W.A." (Castleton).—The prospects of the mine are considered encouraging. The reports of the captain, as also of the meetings, are always inserted in the *Mining Journal*.

PENBRECK CONSOLS.—Much has been said to depreciate this very valuable property, to bear down the price of shares, by those who have sold out with the design of buying up at cheaper rates, Mr. J. R. Raley would, therefore, respectfully caution shareholders, and paying their expenses to meet in the metropolis, there to discuss questions and determine business the details of which they were totally unacquainted with.—S.: *Marycloch*.

AGNA FRIA GOLD MINING COMPANY.—"A.G." (St. Alban).—This company was dissolved and made over to the Quartz Reduction Company, the shares being principally taken up by the Agna Fria holders. The first annual meeting of the new company will be held on Monday next, and a full report of the proceedings will appear in the *Journal* of Feb. 6.

HUCKWORTHY BRIDGE MINE.—Knowing that your well-conducted Journal is the medium of general mining information, I have vainly referred, several past weeks, for some notice of Huckworthy Bridge Mine, near Tavistock, and am at a loss to account for the absence of weekly or fortnightly reports. I am just informed by a distant friend that the mine at present is looking exceedingly promising, and that the lode going east has been recently cut through that it is 7 ft. wide, producing good stones of copper ore, with every indication of soon becoming a regular course of copper ore. I consider it the duty of the resident agent to give at least every fortnight a general report of the mine in your Journal, the absence of which may prove very detrimental to distant shareholders.—W.X.: Jan. 28.

ASTURIAN MINING COMPANY.—I was much pleased to see in your last impression that, in all probability, this intemperate affair would be finally wound-up during the course of the ensuing month. I trust that the liquidators will not allow themselves to be any more deluded by promises to pay, which in too many instances in our experience have only proved so many specious attempts to gain time. Action should now be our watchword, and no further delays.—H.: *St. Paul's Churchyard*.

WHARF SAMSON.—In the *Journal* of last week you referred to the management of this mine, and that there was sufficient cause to call for a dividend. As the mine is at present in a state of such promise, and that the lode going east has been recently cut through that it is 7 ft. wide, producing good stones of copper ore, with every indication of soon becoming a regular course of copper ore. I consider it the duty of the resident agent to give at least every fortnight a general report of the mine in your Journal, the absence of which may prove very detrimental to distant shareholders.—W.X.: Jan. 28.

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, JANUARY 30, 1858.

At last we have a result from the judges appointed to decide upon the award of the prize of 500l. offered by the Steam Collieries Association for the best method of preventing smoke during the combustion of coal from the Newcastle district, in the boilers of marine engines. That the prize has been awarded to Mr. CHARLES WYR WILLIAMS can only be a matter of satisfaction to all who are acquainted with that gentleman's labours in connection with this subject, or who value the sound scientific investigation of practical questions more than the speculative productions of mere dilettanti. We have carefully perused the reports that were made by the judges appointed to examine the question generally, and to decide which of the plans submitted to the association was best calculated to effect the desired object, and shall have occasion further to comment on them. The number of impracticable or inapplicable projects is remarkable—44 out of 103. Of those not included under this head, all plans are more or less condemned, except those which, requiring no special apparatus or adaptation of furnace, consist in the admission of air into the furnace, or at the bridge. These are divided into two classes, according as the air is to be admitted—hot or cold. Mr. WILLIAMS's plan is of the latter kind, and manifests the simplicity so generally characteristic of valuable inventions. Some other plans, involving the same principle, were tried, but not one of the plans which suggest the use of hot air were tried.

The judges stated, indeed, that this method is attended with such practical inconveniences as to lead them to give a decided preference to the plans which are based on the admission of cold air. However, the practical inconveniences referred to are not specified, and we are, consequently, unable to offer any opinion as to the full admissibility of this view. Certainly it would have been more satisfactory if one or two of the hot-air plans had been tried, if only for the purpose of showing their inferiority to the cold air plans. With regard to the general results arrived at by the judges, we are not in a position to say much, as the details of their experiments and the method they adopted have not been made known. We

trust that this information will not be delayed, both because the subject is one of very great importance, and because the results are so different as regards Newcastle coal, from those given by the investigation made for the Admiralty. The first result stated by the judges really involves the second; for if the smoke can be prevented in marine boilers whilst using bituminous coal, then it follows as an obvious consequence that the effect produced by the coal must be increased, seeing that smoke is the negative equivalent of heat. As to the question between Newcastle and Welsh coal (on which subject an article will be found in another column), we do not yet see in what respect the former are superior to the latter, even though the heat hitherto lost by smoke may be utilised; and as regards the great majority of plans by which it is said this may be best effected, the reports of the judges leave the matter much in the same position that it had before those reports were made public.

By the decision to which the judges have come, Mr. WILLIAMS has the gratification of finding the award of the Gold Medal of the Society of Arts in 1856, confirmed by the practical testing of the views put forward in his prize essay. With this well-merited recognition he seems fully satisfied, as he has very liberally placed the prize of 500l. in the hands of the Steam Collieries Association, with a suggestion that it should be invested for the purpose of providing a fund for premiums, to be awarded to stokers who do their work best. Other ways of disposing of the money have been suggested, among which the new Mining College is mentioned, although it does not appear that any of these plans have yet been adopted.

We do not boast the powers of vaticination, nor are we disciples of RAPHAEL, or patrons of Old Moore's "Vox Stellarum;" no, we draw our horoscope from the signs of the times; in doing so, we are fain to declare the horizon presents most favourable aspects for the future, indicating the approach of a season of extraordinary activity in mundane affairs, particularly in mining. This is more than shadowed forth in the following manifestations:—Manchester, Leeds, and the great manufacturing districts, are again getting their mills into work, and their looms into full employment; Birmingham and Sheffield are receiving more orders, the artisans are again getting into work, the demand for metals is evidently gradually increasing, the influx of gold continuous, and its export decreases, the rate of discount falling daily as rapidly as it had advanced, private as well as public confidence is being fast restored, the Indian disturbances virtually quelled; in short, we think few years have opened with brighter prospects for the miner, after so severe prostration, as 1858.

In the face of such evidences and facts, it would be a culpable dereliction of duty were we not to encourage miners to persevere in their endeavours to secure to the nation and to themselves the advantages which must necessarily accrue. Under such a state of affairs it would be wrong of us not to caution many who are now hesitating whether to continue their mines at work, suspend for the present, or wholly abandon them, because they have not lately been remunerative; because property of this nature has lately depreciated in value, they think it will not be worth while to continue the cost.

We earnestly beg these parties, before committing themselves to so suicidal a step, to remember that all mines which have withstood the terrible shock created by the late panic will henceforth be looked upon with greater favour than before, and will be in a very different position to new mines, more particularly if the mines have efficient machinery on them, and have actually produced and sold ore.

To us it appears the very height of folly to suspend such mines at a period like the present: if the machinery be displaced and sold it must be done at a tremendous sacrifice—so many adopting the same resolution of discontinuing operations at the very time they for good results should be setting about getting them in order. It may be depended on (as it is only a common every day incident in mining) that half the mines closed by the effects of this panic will, like hundreds before, be resumed again within the next seven years. We know instances in which it is proposed to close certain mines, because, though they make considerable returns, and are nearly paying their way, yet not having paid interest for the capital after working four or five years, their proprietors are wearied out and sick of what they think the delays of mining. Since an appearance of adversity has arisen they unwisely purpose abandoning their sets, when their great outlays will be available to strangers, and under improved circumstances and prices will be rendered remunerative.

That mines have not been remunerative for four, five, or even more years, is no reason why they should not ultimately be so; few, indeed, are they which have not had to weary out several sets of adventurers, and to struggle through years of trial and adversity. We have lately quoted the great Tressavan, Providence, and South Seton as examples: we are far from being so sanguine as to advise continually working on a barren and worthless lode, but we do, and will, conscientiously declaim against adventurers rashly throwing up their interest to their own ruin, because an adverse time comes over mining, as it sometimes does over every other undertaking, particularly in the face of such appearances as the horizon of the mining world at the present period exhibits; for we verily believe, and in this opinion we know we are supported by those best able to judge, that we are on the dawn of a prosperous day.

For a considerable period after the GOVERNMENT SCHOOL OF MINES had been organised it was supposed by many that the teaching of the professors would be too much characterised by the infusion of the Tuetonic element, and it was believed that all practical knowledge was to be ignored, and in its place minute and crude theories of abstract sciences substituted. We will not here refer to the prejudices which, especially in our metalliferous districts, the proposed plan of the Government had to encounter, nor, at the same time, do we think it necessary to allude to the senseless attacks which have occasionally been made upon the system now introduced: these have emanated often from men, who wedded to certain ideas for a number of years, felt a great distaste for any change—such had been the practice of their forefathers, and from it they would not depart. To this was added a dislike to all things foreign; and, therefore, rather than there should be any innovation, although this should carry improvement with it, they were willing that mining and metallurgical pursuits should remain in statu quo. Another class who have opposed the introduction of any steps taken to educate the miner has been those charlatans who affect a scientific knowledge of mining, when they are absolutely ignorant of its first principles; these discoverers of minerals which do not exist, and who fill their reports with geological terms, the meaning of which they are unacquainted with, must naturally feel that with the diffusion of knowledge their vocation is terminated, and they will have to devise some other means wherewith to gain a subsistence.

If competent persons who had the opportunity of acquiring even only a theoretical acquaintance with mining and metallurgy had been sent out during the gold mining mania, to California and Australia, the British public then would have been spared several millions of money which was wastefully squandered in those countries by incompetent and extravagant agents who had no previous training, and were totally unacquainted with the business they undertook to conduct. As it was, machinery that was not available was put up, and valueless stones crushed and reduced which were not worth the labour expended on them in their getting. Had any of these individuals possessed but the simplest idea of metallurgical processes they would never have proposed the absurd projects which were attempted to be carried into effect for the reduction of the precious metals, and a more intimate acquaintance with the subject would have spared much loss and great inconvenience to those who are nearer home, and prevent the dissemination of useless schemes, which are merely concocted for enriching the projectors at the expense of their credulous dupes.

During the present term our space has not allowed us to give all the lectures by the two professors on Mining and Metallurgy, but so soon as these are completed it is our intention to give a condensation of the lectures delivered on the allied sciences to mining by the other professors. Those which we publish this week are on "Winding" by Mr. WARRINGTON SMYTH, and on the process of "Copper Smelting as practised at Mansfeld," by Dr. PERCY. These lectures, it will be seen, are not only applicable to the particular places they refer to, but by obtaining a knowledge of the various modes in use in other countries where scientific appliances and machinery are not so easily attainable as in England, the miner or smelter will be able to accommodate himself to the circumstances of the case, and may thus avoid a difficulty or overcome an obstacle.

Several of the pupils who have left the institution have already distinguished themselves; but its benefits cannot be fully acknowledged for some years to come, when a greater number will be sent forth to disseminate the knowledge they have acquired; and when this is improved by practice, which is always strongly inculcated on the mind of the pupil, we may expect to see more of mining enterprise, and less of its speculation. Much is still wanting: a great deal has been achieved. The establish-

Another circumstance which tends to lessen the practically available portion of the calorific power of fuel is the amount of water produced by its combustion. It is argued by those who dispute the superiority of Welsh anthracitic coal over Newcastle coal, that as the latter contains more hydrogen, and as the calorific power of hydrogen is three times as great as that of carbon, the heating effect of coal must be greater in pro-

portion to the amount of hydrogen it contains. This argument involves the same disregard of the influence of the products of combustion upon the steam equivalent for the fuel that has been already pointed out. There are good reasons for doubting whether the oxygen contained in coal contributes at all to the production of heat by combining with the hydrogen of the coal; and although that portion of the hydrogen which is over and above the equivalent of the oxygen will doubtless generate more heat than the same quantity of carbon, it is a question whether the amount of that heat which may be made available in practice is greater, or even as great, as that produced by an equal quantity of carbon. It must be remembered that by the combustion of this hydrogen, water is produced, and that this water escapes in the state of steam in the gases passing into the chimney. The conversion of this water into steam involves the consumption of a certain amount of heat, which would otherwise be available for generating an equal weight of steam in the boiler, and the heating of that steam to the temperature of the gases passing into the chimney involves the consumption of more heat, and four times as much as would give the same temperature to the same weight of carbonic acid originating from the burning of carbon. Hence it will be evident that, for the working of a marine boiler with Newcastle coal, which on the average yields 40 per cent. of water in burning, a large amount of heat must be consumed, so as not to be available for generating steam in the boiler.

The presence of pyrites in Welsh coal, so excitingly dwelt upon by the *Daily News*, is very much exaggerated; indeed, it may safely be stated that on the average Welsh coal contains less pyrites disseminated through it than Newcastle coal, as may easily be ascertained by reference to any good analyses of coal. The anthracite of Slieve Donard certainly contains a large amount of pyrites, but this is an Irish coal, and we do not know of any Welsh coal used for steam purposes which at all approaches it in this respect.

We seek in vain in the Admiralty reports for any account of the above-mentioned influences upon the practical value of coal, or any explanation of the difference between the possible and the attained effects, though this difference must strike every practical man as remarkable; and if, as is very likely to be the case, he is unacquainted with the facts we have mentioned, may tend to inspire him with distrust of the main result.

Great stress is laid in the reports upon the endeavour to render the results practical rather than scientific, as if there were some antithesis between practice and science. We do not at all appreciate this endeavour, or sympathise with the vulgar prejudice against what are termed mere laboratory results, as applied to practical affairs. Laboratory results, if they are true, and correctly brought to bear upon practice, cannot fail to be valuable. The mischief sometimes produced in this way arises chiefly from a want of duly appreciating and understanding the conditions under which they may be legitimately applied to practice. Hence we attach no weight at all to Dr. Playfair's recommendation of his results as free from inferences drawn from such results, any more than to the objection raised by the *Daily News*, that the analyses of the samples of coal were performed on a few grains only of the coal. Every practical chemist knows that with such a quantity accuracy may be most certainly attained, and there is no great difficulty in obtaining a few grains which shall properly represent the average mass of coal.

The results which are called practical in the Admiralty reports, those obtained with the boiler, present a degree of variation, amounting in some instances to 10 per cent., that contrasts singularly enough with the formidable array of correction and algebraic formulae employed in obtaining these results. The plan adopted of taking the mean of such discrepant results appears much too arbitrary, to say the least of it. Very worthy of remark, too, is the following passage in the report of one of the gentlemen who did, or superintended, the work:—"We have not ventured to make any deduction of principles, either from the experiments themselves or from the observations made during their progress, being satisfied that, although many points of great importance and interest have presented themselves, still, from the limited means at our disposal, and necessarily imperfect character of our observations, we should not be justified in drawing any definite conclusions in a matter which requires more extended observations, and which is affected by so many modifying circumstances."

This is signed by a Mr. J. Wilson, of whom it is said his "practical knowledge well fitted him for the task," and to whom the arrangement of the apparatus and of the method of experiment were confided. We do not know what may have been the antecedents of this gentleman, that his "practical knowledge" should render him so eminently competent for the investigation of this subject, nor have we been able to ascertain it; it is to be hoped, however, that Dr. Playfair had good grounds for this opinion. Certainly, it strikes one as remarkable that a gentleman of such "practical knowledge" should have selected a Cornish boiler for making experiments that were to decide upon the coal best suited for marine boilers; more especially when it is remembered that, in addition to the funds of the Museum of Economic Geology, the Admiralty granted 600*l.* to defray the expenses of the investigation up to March, 1846; and, as we are informed in the report, "subsequently also supplied additional funds." Want of means, therefore, cannot have been the cause. It is equally remarkable that, in measuring the water in the boiler at different temperatures, he should have considered it "unnecessary to make a correction" for the alteration in its capacity until this was shown to amount to 60-625 lbs. between 150° and 212°; and that after devising the elaborate correction for the influence of the wood used for lighting the fire, he should have disregarded the amount of heat that went up the flue. Some notion of this seems to have dawned upon him, and thermometers were placed in the flues of the furnace; but so carefully protected from the influence of the hot air passing over them, that when a naked bulb thermometer was accidentally introduced, it was found to show a temperature of 530°, while the thermometer intended to indicate the temperature of the air showed only 390°. With such facts as these duly recorded it is, indeed, superfluous to disclaim the scientific element in these experiments.

THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

JAN. 28.—The mining interest may be fairly considered to be again entering upon a period of renewed prosperity. Last week the copper standard went up more than 4*l.* on ores sold in Cornwall, and at the Swansea ticketing the advance was still greater, as compared with the previous sale on Jan. 7. This improvement in the price given to the miners has since been followed by an advance in the price of fine copper, which circumstance, coupled with other reasons, leads with considerable certainty to the conclusion that the standard will further improve. We may expect to see it rise 5*l.* or 6*l.* more very shortly, and the probability is that an excellent standard will be attained in March. Looking to these circumstances, and the general expectation existing of the arrival of better times for mining, it is not surprising that the share market generally has considerably improved. A second advance has taken place in the price of tin, which has given a further stimulus to the shares of tin mines, several of which are now in much more favour than they have been for some time. The price of lead, also, it is expected is on the eve of an advance.

There have been many enquiries for shares, and some transactions at advanced prices; but in very many cases holders are looking for higher prices than they can for the present realise. There is a good account of Doleath, which, with the advanced price of tin, will soon make handsome profits again. Wheal Providence has opened up some very productive ground in the 65 and 75 fathom levels. West Basset is looking very well in the western part of the mine, where there is a long extent of ground for working on the course of the lodes. Alfred Consols shares have somewhat improved. Wheal Buller is looking well; the balance in hand, after payment of 7*l.* 10*s.* dividend last week, was upwards of 2000*l.* In Grambler, the pitches are looking well, being set at low tributes; the 36 end is also encouraging, and likely to be more productive. Cargill shares have gone up to 18*l.* East Falmouth is not looking so well. Basset shares are firm, and likely to advance. South Tolgus continues to look well in the bottom, and holders are firm at the recent advance. East Basset are from 95*l.* to 100*l.* West Damsel is looking well, and the shares have gone up. Wheal Margery shares have somewhat improved. Great Wheal Busy is becoming increasingly productive. In the Scourier district two other sets of old mines are likely to be again set to work, it is said, with very good prospects of success. Great Hewas is doing well, and opening up productive tin ground.

A meeting of the governors and subscribers of the MINING SCHOOL was held at Truro last week—Viscount Falmouth in the chair, when a report of the progress of the school was presented. It is very evident that whatever opportunities for education may be afforded by the Mining School at Truro, they are not appreciated by the mining agents, and persons con-

nected with the mining interest of the county. It appears, however, from the proceedings of the meeting held last week, that there is some probability of Government affording aid towards the establishment of district mining schools; and, after some consideration, it was resolved that the subscribers be solicited to continue their subscriptions for another three years, with the expectation that means may be devised for obtaining the assistance of the Government in preparing masters to take charge of local mining schools. Viscount Falmouth, Mr. Basset, Mr. Kendall, M.P., and the other subscribers present, consented to continue their subscriptions, and probably, with this object in view, the school at Truro may continue. It has generally been objected that a school at Truro only is of little service in promoting mining education; but if the practical men, who have been working in mines from their early years, had the means of obtaining in the localities where they work instruction useful in mining operations, many persons would be likely to subscribe towards affording such instruction who now refuse to assist the Mining School at Truro. Experienced tributers, when educated, would make mining agents of the first class; and those are the men whose instruction should be the first object with gentlemen who desire to advance the scientific as well as the practical mining of the county.

It is very requisite that mine managers should not be too lenient towards unscrupulous tributers, who sometimes take pitches, and then abandon them, to the detriment of the adventurers, whose works are thrown back by such conduct. Mr. James, the purser of the Botallack Mine, recently summoned four miners before the magistrates of Penzance for breach of their contract. They had taken a bargain at Chyornish engine-shaft, "to cut down and clear-up to the bottom, by four men, at 4*l.* per fathom; the shaft to be made where directed, to be 10*ft.* 6 in. long, by 3*ft.* 6 in. wide, within the timber, and the whole to be done to the satisfaction of the agents." The work was set on Saturday, and the men came on Monday following, and took out some materials. On Monday they came again and went underground, and then refused to work, on the ground that it was a dangerous spot to work in. The "take," therefore, remained idle for a month, when it was re-let to other men on the same terms. The magistrate, Mr. T. S. Bolitho, said the bargains when taken should be not only read over to the men, but signed by them. In this case it was not done, and if the men had not entered on the bargain by taking out some materials, the magistrates could have had no jurisdiction, and no power of interference in the case. Mr. Bolitho considered that every man should sign his contract, and have a copy of it delivered to him. The evidence of Capt. Hocking and Boyne was then given, to the effect that the ground in question was not at all dangerous to work; and the magistrates were about to commit the miners to prison, when a compromise was effected, with the assent of Mr. James, the miners paying 12*s.* each towards the Penzance Dispensary funds.

The Cornwall Railway is making progress. A considerable portion of the rails has been contracted for, and the line will be ready for opening as soon as Mr. Brunel's great bridge over the Tamar is completed. It will be an important event for Cornwall when the line is opened. Tourists will find much to interest them in this western end of the kingdom; and mining shareholders resident out of the county will more generally visit the mines, and confer personally with the agents and local shareholders on their state and prospects.

THE IRON AND METAL TRADE OF SOUTH STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN WOLVERHAMPTON.]

JAN. 28.—Little actual improvement can be reported in the Iron Trade of this district. Enquiries for rails for the home market and the East Indies have been extremely numerous, but this department of the iron trade is not largely carried on in South Staffordshire, although probably during the present depression some orders may be taken here; in fact, a few are understood to have been given out already. In respect to other kinds of iron, the orders are very limited. In some few cases orders for America, previously countermanded, have been renewed, but extremely little is being exported thither. There has scarcely been sufficient time as yet to enable consumers to recover from the recent crisis, but a few weeks will probably bring orders, as with bars at 8*l.* per ton Staffordshire iron can well compete with native production. But anything like activity in the iron trade is rendered impossible by the opposition of a considerable portion of the puddlers and millmen to the reduction of 1*s.* per ton in their wages, decided upon by the masters when they made a proportionate reduction in the price of iron at the last quarterly meeting. An understanding was entered into, some years ago, that the price per ton received by puddlers should fluctuate with the trade price of bars, being in shillings what the latter was in pounds, with this limitation, that they should never receive less than 7*s.* nor more than 10*s.* per ton. During three months in 1853, and the last six months in 1854, the trade price of bars was 11*l.*, but this extreme rate was really not received, except in very few instances. The masters having very large orders on their books, sufficient to last them for many months, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disinclination to reduced prices, so long as it can possibly be avoided. Hence, before a reduction is declared it has, in almost every case, really taken place some time before; whilst, when a rise is resolved upon, there are usually orders on hand at the former rates, which require several months to complete. It follows that this arrangement gives great advantages to the men; but it has by no means been strictly carried out by the masters, raised the price of iron; but before fresh orders—except a few exceptional ones—were given at the raised rates the price fell. Not only so, but it is well known that the trade price represents the extreme rate, which is received by only a few firms in the district, and that there is a great disin

Wales, for example, smallpox is now raging to an alarming extent, and a number of deaths have already taken place. The prevalence of this disease is to be attributed in a great measure to confined and ill-ventilated dwellings, and to inefficient drainage. The colliers' residences are often little better than squalid huts, every inch of which is filled at night with human beings. In some parts huts have been erected in a few hours; for it is a common idea in Wales, that if a house is built in the course of one night on any person's land the owner cannot have it removed. The singular custom is often indulged in, and the claim on the land is not unfrequently allowed. The Duke of Beaufort's property between Tredegar and Merthyr is strewed with huts built in this way, but rigorous measures are now adopted to check the practice, and the few sticks and stones are knocked down as soon as they appear. We cannot feel surprised that disease should grow up under such circumstances, and though, of course, things are not quite so bad on the actual sites of the iron-works, still there is room for very great improvement in the habitations provided for the workmen.

We stated last week that the picturesque Caerhewell Suspension Bridge had suddenly fallen, causing the death of a man who was driving a team across it at the time. The contractors, Messrs. Dredge and Stephenson, have had their attention directed to the insecure condition of the structure on several occasions, but they have always expressed their perfect confidence in its stability. It was thrown open in 1854, and people were afraid to cross it for some time, in consequence of a statement having been made that it "had partly given way." We are unable to give any reliable information at present on the cause of the disaster, but interesting particulars will, doubtless, transpire at the inquest, to be held on Wednesday next.

We have so frequently had occasion to chronicle the progress of the strikes here, that we fear any further particulars concerning them would prove tedious to the reader. It will be sufficient to state that the men now out are comparatively few, and they are continually dropping in small groups. Messrs. Powell's pits, at Abercrombie, are for the most part, worked on firm measures taken by that extensive firm probably expedited the end of the strike. The men saw that they were required to bring colliers from a distance if their prices were not accepted, and this thought them to their reason sooner than might otherwise have been the case.

Improvement is taking place at many of the iron-works for the introduction of gas, an improvement sadly wanted on the hills. A meeting has been held at Aberystwyth for this purpose, and private individuals are exerting themselves to carry out the scheme. It meets with opposition from some of the rate-payers, although the majority are in favour of it. At Crickhowell, also, a public meeting has been held with a similar object, and resolutions passed for the necessary steps to be taken.

NEWFOUNDLAND, ITS FORMATION AND GENERAL ASPECT.

As in all probability the island of Newfoundland may be a comparatively unknown section of the globe to most of your readers, and as it is now becoming a place of mineralogical importance, I shall endeavour briefly to convey some idea of the formation and general aspect of the colony. A reference to the map will show that Newfoundland is about 300 miles from east to west, and 320 miles from north to south; that it is more southerly than Great Britain, and is distant some 1700 miles west of Ireland. The climate is, however, much more severe than in England, boisterous winds more frequent, and fogs prevalent, although not nearly to the extent generally supposed by Europeans. A long, dreary spring, or rather termination of winter, is the only really disagreeable feature in a Newfoundland season. The climate, notwithstanding its inclemency, is remarkably salubrious, and the longevity of the inhabitants exceeds the average of more favoured countries. The population of the colony is about 100,000, and is principally composed of a fine, sturdy race of fishermen. The mercantile community, who reside principally at St. John's, the capital, a town numbering some 20,000 souls, are a well-informed body of men, and are celebrated for their great hospitality to strangers.

The valuable cod and seal fisheries of the coast are too well known to require present comment, while inland are immense herds of a species of reindeer (*Cervus tarandus*), wolves, bears, foxes, Arctic hares, beavers, and other fur-bearing animals; grouse (*Tetra alba*), curlews, wild geese, ducks, and other wild fowl are tolerably abundant. The chase is, however, attended with great labour, and even in the wildest sections of the country the hunter may toil an entire day without firing a shot. The lakes and rivers teem with trout of every variety, and in many localities salmon are abundant. There are no inhabitants in the interior; even the few Indians (*Micmacs*) reside in the immediate vicinity of the sea shore.

The surface of the country is in general much broken up by ravines and precipices until you penetrate inland, through some 20 miles of low woods and dense brushwood; you then come upon vast rolling plains, or savannahs, of marvellous beauty and solemnity; here and there patches of forest, while countless lakes appear as far as the eye can reach. The mountains are not lofty, 1100 to 1200 feet being the altitude of the highest; but as they often stand isolated and alone they have a much more imposing appearance than if higher and in continuous range. As you advance northward the woods increase in density and extent, and in some places pine of large growth, and of very compact fibre, is found. The general trees of the forest are spruce trees (*Pinus nigra* and *prubra*), which predominate, birch, and larch. Neither beech, oak, ash, nor maple, all of which timber is indigenous to the North American continent, are to be found in Newfoundland.

The greatest difficulty in ascertaining the mineralogical capabilities of the country arises from the surface of the land being universally covered with a thick coating of moss, the growth on the decay of centuries. So entirely is the island covered with this vegetation, that it is only around the bold sea cliffs and along brook margins that researches have as yet to any extent been made; the result of such researches shall be given in succeeding letters.

F. N. GIBBON.

CHEMICAL GLEANINGS.—No. IX.

BY RICHARD V. TUSON, F.C.S., F.S.A.

SUBSTITUTE FOR ALCOHOL FOR THE BLOWPIPE.—For this purpose, M. Pissani recommends that a mixture be employed consisting of 6 parts of spirits of wine (spec. grav. 0.848), 1 part of turpentine, both by measure, and a few drops of ether. The spirits of wine may be replaced by 4 parts of wood spirit. The liquid should be perfectly bright and clear, or else the lamp will smoke. According to M. Pissani's experiments, it appears that the above mixture, when burned, has a very high heating power, and greatly exceeds that of ordinary spirits of wine. In using most other combustibles for the blowpipe lamp, it is very difficult to obtain a well-defined reducing flame, but by employing the fluid recommended by the author its appearance is rendered most distinct.

IONIZED HYDROGEN.—According to Prof. Osann, hydrogen gas obtained by passing a current of voltaic electricity through freshly-distilled Norwegian sulphuric acid exerts a more powerful reducing action than when prepared in the ordinary way. If the hydrogen thus obtained be passed through a solution of sulphate of silver, the latter is reduced to the metallic state. Hydrogen in contact with finely-divided platinum also acquires this property.

NEW COMPOUNDS OF SILICIUM.—The following compounds of silicium have been prepared and studied by Buff and Wöhler:—1. Hydrogen combines with silicium to form a gaseous compound, which, when in contact with the air, ignites spontaneously, burning with a white flame, and with the production of silicic acid. If a solid surface be applied to the flame of the silicuretted hydrogen, a brown amorphous deposit of silicium forms thereon. Silicium also deposits if the gas be passed through a red hot tube. A mixture of silicuretted hydrogen and chlorine detonates violently. 2. A compound composed of protosilicic acid of silicium with hydrochloric acid may be produced, which is a colourless, mobile, liquid, fumes strongly in the air, and boils at 80° F. 3. A compound very similar to the last exists, consisting of protosilicic acid of silicium and hydrobromic acid. 4. Protosilicic acid of silicium with hydrochloric acid is a dark red crystalline, fusible, and volatile substance. This compound dissolves in bisulphide of carbon, forming a blood-red solution, from which it crystallizes. 5. Hydrated oxide of silicium is a snow-white amorphous substance, differing widely in its appearance from silica. In consequence of its extreme lightness, it floats upon water; it sinks in ether. It dissolves, with the evolution of hydrogen gas, and the formation of alkaline silicate, in the caustic and carbonated alkalies, and in ammonia. The only acid which dissolves it is hydrochloric acid, hydrogen being at the same time evolved. Heated to 572° F., it undergoes no change, but if the temperature be increased it burns, accompanied by the elimination of hydrogen gas. It burns brilliantly when heated in oxygen. It is sparingly soluble in water, and the solution produced, when soon undergoes decomposition, has the power of reducing metallic gold and palladium from the chlorides of these metals, and selenium and tellurium from selenious and tellurous acids. Hydrated oxide of silicium mixed with a solution of nitrate of silver instantly assumes a pale brown colour, which is turned black by ammonia, owing to the formation of silicate of silver.

AFFINITY OF NITROGEN FOR BORON AND TITANIUM.—Wöhler and Ste.-Claire Deville have observed that nitrogen has the power of uniting directly with boron and titanium. This observation possesses the greatest interest for the chemist, from his having hitherto regarded nitrogen as a body which has the least affinity to unite directly with any other element. This indisposition to combine directly with other elementary substances was considered highly characteristic of nitrogen. The authors state that when titanium is heated in the air it combines with the nitrogen, and not with the oxygen, as might have been expected, forming copper coloured granules of nitride of titanium. If boron, or a mixture of boracic acid and charcoal, be heated in an atmosphere of nitrogen, a white, infusible, nitride of boron is produced. A nitride of silicium has also been formed.

ACTION OF THE ATMOSPHERE ON ZINC.—Dr. Pettenkofer, in a report addressed to the Principal of the Bavarian Commission of Railways, states that, according to his experiments, a zinc rod in the course of 27 years is oxidized to the extent of 8.281 grammes (about 130 grains) per square foot, nearly one half of which is removed by water condensed from the atmosphere. The author also observes that the destruction of zinc roofs is certain and inevitable, and that a coating of oxide can never completely protect the subjacent metal from further oxidation.

INDIRECT ESTIMATION OF IRON BY SULPHURETTED HYDROGEN.—Prof. Dufrenoy proposes to estimate iron by ascertaining the amount of sulphur which is precipitated when persalts of iron are reduced to the state of proto-salts by sulphuretted hydrogen. According to the author's statements, the results obtained by his method are exceedingly accurate. This process will probably be of great use in determining the amount of peroxide of iron when mixed with protoxide.

ROLLING IRON.—Mr. Thos. Ward, Greatbridge, has patented an improved mode of rolling iron, by which the edges are of superior metal, which is an advantage when the strip is to be used for tubes and other purposes.

WEEKLY LIST OF NEW PATENTS.

GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.—H. Desmoulin, Paris: New metallic alloys.—C. Barlow, Chancery-lane: Registering water-meter.—M. de Resorvitz, E. C. SALVA, Paris: Preparation of coal and other fuel.—J. Srenson, Northampton: Manufacture of wrought-iron.—J. Vallery, Ranelagh: Steam-engines.—R. J. Hanson, Newton Heath, Manchester: Machinery or apparatus for drawing or extracting spikes or trenails from railway sleepers and chairs, and other similar purposes.—P. Robertson, Sun-court, Cornhill: Lamps.—A. and T. Walker, Shotts: Treatment or preparation of iron for casting metal.—W. H. Wilson, Worcester: Pistons for steam engines driven by steam or any other elastic fluid, which improvements are also applicable to the pistons and plungers of pumps.—C. Ransworth, Sheffield: Construction of springs for sustaining loads and moderate concussions.—J. J. Russell, Wednesbury: Apparatus for manufacture of welded tubes.

VENTILATING MINES.—Mr. J. M. Paull, Alston, thus recently specified his patent for improved means for ventilating coal and other mines:—For this purpose at the lower part of an upcast shaft a closed furnace is constructed, and above the furnace is constructed an enclosed chamber, from the upper part of which a suitable chimney rises up the upcast shaft; through the enclosed chamber are fixed numerous pipes, the air from the mine is conducted to the inclosed space into which the ends of all the pipes come, hence, as the pipes become heated by the fire in the furnace, the air in the pipes becomes heated and is quickly drawn up the pipes, and through up the chimney by the courses. From the fact that air expands on the application of heat, I should advise that the diameter of the tubes be increased towards the ends nearest the heated column communicating with the surface, causing a vacuum, which is immediately refilled with pure air collected in the workings and conducted to the apparatus by the courses. From the fact that air expands on the application of heat, I should advise that the diameter of the tubes be increased towards the ends nearest the ascending column, and to be of an average of not more than nine, or less than six, inches in diameter, though I do not confine myself to these dimensions. The length of the tubes depends on the width of the furnace, but it is desirable that not less than six feet be exposed to the action of the fire. A wall or breastwork is constructed of small tubes dividing and subdividing the apertures by which the air necessary for the combustion of the fuel is introduced into the furnace, in the same state of division as that of the safety lamp. The tubes of which the wall is constructed I should advise never to be more than two inches in diameter, one end of each to be covered with a bag of wire gauze, so calculated that the interstices in the gauze to be equal to the aperture of the tube. The advantages to be gained by this mode of rairying will be understood from the fact that all the air, whether pure or otherwise, will be brought into actual contact with the rairying agent, thereby causing its perfect dissemination through the mass. The means whereby the heating surface may be made or increased to any extent. The safety with which even explosive gases can be brought under the influence of the fire without being liable to explosion. Means by which gases incapable of supporting combustion may be heated and removed with a facility equal to those capable, and the direct action of the heat generated; consequently its use to the best advantage.

GURPIN'S SELF-ACTING RAILWAY-BRAKE.—A first trial of this important invention was made this week, at Ashford, by the South-Eastern Railway Company, and was attended with complete success. Gurpin's "Centrifugal Regulator" was fitted, at a very trifling outlay, to one of the above company's ordinary luggage-vans with sliding breaks, in order to show that the new apparatus can be easily adapted to the rolling stock now in use. Next week, we are informed, Gurpin's complete system will be applied to one or more first-class carriages; and, about Feb. 8, experiments will be continued on a more extensive scale. So far the results have been highly satisfactory, and merit the attention of the railway world.

MOY'S PATENT STEAM-ENGINE.—In our notice of this invention, in last week's Journal, a typographical error occurs, which is very important; it is therein stated that "The" steam is allowed to form in the boiler, whereas it should have been, "No" steam is allowed to form in the boiler. This forms the chief peculiarity of the invention. By keeping the boiler tube filled with steam, as presented from being formed in the boiler, and thus the steam is substituted for latent heat, it appears to us that this mode of working will ensure the greatest possible amount of duty from the consumption of a given quantity of coals, and cause the steam-engine to become a cheaper, and more powerful and manageable servant than hitherto.

IMPORTANT TO MINE OWNERS AND OTHERS REQUIRING IRON OF A VERY SUPERIOR QUALITY FOR CHAINS, AND ANY PURPOSES WHERE GREAT TOUGHNESS IS NEEDED.—MESSRS. R. AND W. JOHNSON AND CO., OF BRADFORD IRONWORKS, NEAR MANCHESTER, can with the greatest confidence RECOMMEND THEIR BEST DOUBLE WORKED SELECTED CHARCOAL SCRAP IRON, as SUPERIOR TO ANY ARTICLE ever offered.—For prices, &c., apply to Mr. J. HOSKLEY, iron and metal merchant, Barlow-court, Market-st., Manchester.

WIDNES OIL WORKS AND SOAPERY, RUNCORN GAP, NEAR ST. HELENS AND WARRINGTON, LANCASHIRE.

MR. WHEATLEY KIRK very respectfully announces that he is favoured with instructions from the proprietor, who is declining the business, on account of his intended change of residence, to SELL BY AUCTION, on Thursday, Feb. 25, 1858, on the premises of the said works known as the WIDNES OIL WORKS, Runcorn Gap, near St. Helens and Warrington, Lancashire, viz:—ALL that PLOT or PARCEL of LAND containing, by admeasurement, 3712 square yards, or thereabouts, be the same more or less, which is leased for an unexpired term of 67 years, at the low rental of £30 per annum, from the St. Helens Railway and Canal Company, upon which are erected these exceedingly valuable works, the whole being upon the said line of railway and canal, thus affording the utmost facility for transport of goods to and from London, Liverpool, and Manchester, the coal and iron districts, and indeed all parts of the kingdom or abroad.

The BUILDINGS, which are numerous, are built of brick of the best construction. The UTENSILS and PLANT are likewise of the most modern class, and embrace ten cast-iron stills, six of about 30 barrels, and four of 70 and 75 barrels of resin each; five wrought-iron coolers, perfectly portable, being fitted together with flange-joints, and bolts and nuts, holding 4000 gallons each; ten boiling pans, holding 250 gallons; a number of iron vats, holding from 5 to 8 tons each; lead worms; 16 vats of timber, containing each about 1½ ton; several cast-iron reservoirs, large and small, with wrought-iron covers; steam and water-pipes; 6-horse steam-engine and two boilers; and a large quantity of other valuable plant, utensils, and effects, adapted for carrying on the trade of resin or other oil or grease manufacturer; together with the necessary plant for soap-making, &c., all in fine working condition. There is also an abundant supply of the purest water from an Artesian well belonging to, and being on, the premises. The proprietor has also a right of taking water from the canal to an extent for the purpose of the works.

ORDER OF SALE.—The sale to commence punctually at Twelve o'clock, and the whole, including land, buildings, plant, utensils, &c., will be offered first in one entire lot, as a working concern; and if not so sold, then the land, buildings, steam-engine, and boilers, without the working plant, utensils, &c., will be offered in one lot; after which the whole of the working plant, steam-engine, boilers, utensils, &c., will be proceeded with, and sold piecemeal.

For further particulars see catalogues, which, with any other information, may be had at the offices of the auctioneer, Cross-street Chambers, Cross-street, Manchester; or 4, Kirgate, Leeds.

IRELAND.—Mr. WHEATLEY KIRK is instructed to PREPARE FOR SALE, BY AUCTION, the WHOLE of that exceedingly valuable FOUNDRY AND ENGINEERING ESTABLISHMENT, LAND, BUILDINGS, TOOLS, PLANT, and MACHINERY, known as the SHANNON FOUNDRY, Limerick, Ireland.—Further particulars in future papers, or of the auctioneer.

STEAM-ENGINES OF EVERY DESCRIPTION, including BEAM, CONDENSING, or HIGH-PRESSURE, HORIZONTAL or VERTICAL; also, LOCOMOTIVES, BOILERS, ENGINEERS' TOOLS, RAILWAY, &c. &c. &c. and OTHER PLANT and MACHINERY, may be had on the shortest notice, on application to WHEATLEY KIRK, merchant engineer, auctioneer, and valuer, Cross-street Chambers, Manchester.

N.B. See his Weekly Circular (established 1850), which may be had by post free.

BUCKINGHAMSHIRE RAILWAY COMPANY.—Notice is hereby given, that the NEXT ORDINARY HALF-YEARLY MEETING of the proprietors in the Buckinghamshire Railway Company will be HELD at the Euston Station, London, on Friday, 19th February, 1858, at Eleven o'clock A.M. By order of the Board, HARRY VERNER, Chairman.

The books kept for the registration of transfers of stock will be closed on the 6th of February, and will remain so until after the meeting.

Offices of the Company, Euston Station, London, Jan. 25, 1858.

MADRAS RAILWAY COMPANY.—SECOND EXTENSION SHARES (£10 per share paid).

Notice is hereby given, that, in pursuance of a resolution of the Board of Directors, the proprietors of Second Extension Shares (£10 per share paid) in the Madras Railway Company are required to PAY A CALL OF FIVE POUNDS per share on each of their respective shares, on or before the 34th day of February next, at the Union Bank of London, 2, Princes-street, in the City of London.

Notice is hereby further given, that interest at the rate of 5 per cent. per annum will be charged upon all calls remaining unpaid after the day above-mentioned; that the proprietors whose calls are not paid on or before the day named will further incur a loss of interest on the amount called upon each share, for the period intervening between the 24th day of February aforesaid, and the date of which the company is entitled, under the contract, to make the next payment to the East India Company, on account of the capital; and that if default is made in payment of this call, the shares in respect of which default is made will become liable to forfeiture, under the company's Deed of Settlement.

By order of the Board, JAMES WALKER, Managing Director.

23, New Broad-street, London, E.C., Jan. 23, 1858.

COPIAPO AND CALDERA RAILWAY.—Notice is hereby given, that the QUARTERLY DIVIDEND OF FOUR PER CENT. (declared in Copiapo on the 24th of October last) will be PAID to the holders of shares registered in England, at the Banking-house of Messrs. Williams, Deacon, and Co., on and after the 15th January inst.

By order, EDWARD J. COLE.

Office of Registry and Transfer, 2, New Broad-street, City, 1, 1858.

COPIAPO EXTENSION RAILWAY COMPANY.—Notice is hereby given, that SIX MONTHS' INTEREST, at the rate of SIX PER CENT. per annum, will be PAYABLE on the deposit of £2 per share, on and after the 1st February next, at the office of the company, 2, New Broad-street.

The scrip must be left at the office, and the necessary form of application for the interest filled up three clear days before the same can be paid.

London, Jan. 1, 1858. By order of the Directors, EDWD. J. COLE, Sec.

COPIAPO EXTENSION RAILWAY COMPANY.—Notice is hereby given, that the directors have made a CALL OF ONE POUND per share, payable at the Banking-house of Messrs. Williams, Deacon, and Co., on or before the 25th day of January inst.

The scrip certificates, together with the bankers' receipt, must be left at the office of the company, 2, New Broad-street, to have the call inscribed thereon.

London, Jan. 1, 1858. By order of the Directors, EDWD. J. COLE, Sec.

WANTED, a SITUATION as ENGINEER. The advertiser has had the engineering management of some extensive collieries in the North of England and in South Wales, and has a practical knowledge of engine machinery, railway, dock, and canal works. First-rate references.—Address, "M. P.," Post-office, Aberdare, Glamorganshire.

WANTED, by a YOUNG MAN of steady habits, a SITUATION as CLERK. He has been during the last twelve years accustomed to mining accounts and business. He will refer to his present employer, with whom he has been some years.—Address, or apply, to "W. W.," Mr. Gostley's, 31, Threadneedle-street, E.C.

WANTED, by a YOUNG MAN of experience, a SITUATION as MANAGER of a COLLIERY or COLLIERIES. He thoroughly understands the getting, ventilating, planning, &c., of coal mines, and can give the highest testimonials as to character, abilities, &c.—Address, "W. B. W.," Post-office, Derby.

WANTED, a PERSON to DIRECT the ENTIRE WORK UNDERGROUND and at SURFACE of a COLLIERY in SOUTH WALES. He must have had practical experience in management and in shipping the coal, and must also be competent to inspect the machinery, and to make the plans, rectifications, and surveys, required in working the colliery.—Letters, stating age, qualification, and salary required, to be addressed to Mr. EATON, Walbrook-buildings, London.

TO IRON AND COAL MASTERS.—WANTED, by a YOUNG MAN of thorough practical experience, a SITUATION to SUPERINTEND the MANAGEMENT of BLAST FURNACES. The advertiser has been 15 years in the trade, and is well acquainted with the manufacturing of wrought and cast-iron, making out yields and costs, book-keeping, and the general management of an office. Would be of great service to those about to start such works, from his knowledge of the trade. Can be well recommended for steadiness and ability.—Address, "A.," Post-office, Alfreton, Derbyshire.

TO MANAGERS OF COLLIERIES.—WANTED immediately, a PERSON qualified to SUPERINTEND the WORKING of a COLLIERY, where the output will be about 2000 tons per week.—Apply, stating salary required, with references, &c., to Mr. JOHN COXES, Devizes, Wilt.

TO FURNACE BUILDERS AND MANAGERS.—WANTED, a PERSON qualified to PREPARE PLANS for, and to SUPERINTEND the ERECTION of, TWO BLAST FURNACES; also to manage the same after.—Apply, stating salary, with references, &c., to Mr. JOHN COXES, Devizes, Wilt.

WANTED, TWO GOOD BLAST ENGINES, of 100 horse power each.—State full particulars and price to Mr. JOHN COXES, Devizes, Wilt.

TO CHAIN, ANCHOR, BOAT-PLATE, AND ANGLE IRON MANUFACTURERS.—A FIRM in GLASGOW, having a first-class connection with the ship-builders on the Clyde and the East of Scotland, are desirous of increasing their business by SELLING ON COMMISSION the above-mentioned goods.—Manufacturers will get further particulars by applying, "R. Mac," Post-office, Glasgow.

WANTED, a 60 or 60 in. PUMPING ENGINE, for a mine in the western part of Cornwall, with two 10-ton boilers. The engine and boilers must be in good condition, and the price low.—Full particulars, stating price, age, maker's name, and situation, to be addressed to J. RANDALL, 10, Lorrimer-square, Kennington, London.

WANTED, a GOOD SECOND-HAND PUMPING ENGINE, 36 to 45 in. cylinder.—Apply to W. H. M. BLKWA, Esq., Birmingham.

MR. W. S. COPE, MINING AND CIVIL ENGINEER, is in WANT of a RESPECTABLE, WELL-EDUCATED YOUTH as an APPRENTICE. Premium required.—Halfpenny Cottage, Hanley, Staffordshire.

PARTNERSHIP.—A GENTLEMAN with a most valuable connection as engineering auctioneer and valuer, also as merchant engineer and machinery agent, for home and exportation, is desirous of MEETING with a PARTNER, a man of influence, intelligent, energetic, and industrious habits, to enable him to extend his sphere of operations, and establish a branch in London.—Apply, "P. S.," Mining Journal office, 26, Fleet-street, London.

PARTNER WANTED, to JOIN the ADVERTISER in a going COLLIERY and IRONWORK.—Apply, with real name and address, to "P. R.," Mining Journal office, 26, Fleet-street, London.

LAND OR MINE AGENT AND SURVEYOR.—A GENTLEMAN who has ten years' experience as MANAGING LAND and MINE AGENT and SURVEYOR, and can give first class references, is desirous of making a new arrangement.—Address, "H.," Messrs. Pottle and Son, 14, Royal Exchange, London.

TO IRONMASTERS.—The ADVERTISER has been MANAGING FORGE and MILLS for the last 30 years, and will shortly be OPEN to a FRESH ENGAGEMENT. Unexceptionable references.—Address, W. B. FORKIN, chemist, Maesteg, Bridgend, Glamorganshire.

TO IRON MANUFACTURERS, RAILWAY WHEEL MAKERS, &c.—A GENTLEMAN, who is practically acquainted with the MANUFACTURE of every description of RAILWAY BARS, TYRES, AXLES, WHEELS, and MERCHANT IRON, and who has a good business connection in this country, as well as on the Continent, is OPEN to an ENGAGEMENT.—Address, "R. D.," Post-office, St. Helen's, Lancashire.

TO ENGINEERS.—ASHBURNTON UNITED MINES.—TO BE CONTRACTED FOR, BY TENDER, a good SECOND-HAND STEAM-ENGINE, of from 22 to 26 in. cylinder, the same to be used for drawing and stamping, with reverse winding gear, with a 50-head stamps attached; the boiler to be in proportion to the engine, and the whole fixed and fit to work. The contractor to provide stone, timber, and other materials, build the walls, cover the engine and boiler houses, &c.; the proprietors to provide only scaffolding timber.—Tenders to be forwarded to Mr. NICHOLAS EXNOR, Wiveliscombe, Somerset.

FOR SALE, BY PRIVATE CONTRACT, at TREHANE MINE, near Liskeard, a 40-inch cylinder ENGINE, with two boilers and a crusher.—For particulars and price, apply to Mr. R. DALY, 16, Union-court, Old Broad-street, London; Mr. JOHN PARSONS, Marazion, Cornwall; or Capt. P. HARVEY, on the mine.

TO BE SOLD, TWENTY SHARES in the LINZ COLLIERY COMPANY (LIMITED), situated at Burnupfield, near Gatehead. The proprietors are gentlemen of great influence and wealth, and the coal produced is of the first class for locomotive purposes. The mine is in full working order. The shares are £100 each, with £30 paid.—Address, "P. T.," Mining Journal office, 26, Fleet-street, London.

TO BE SOLD, CHEAP, ONE 36 in. ROTARY ENGINE, with fly-wheel and one boiler (near Plymouth).—For particulars, apply to Mr. H. WILLS, 17½, George-street, Plymouth.

WATER-WHEEL, at least 60 ft. diam., and 18 or 19 in. PUMPS, WANTED.—Parties having either to dispose of, can send particulars and price to Mr. JENN HITCHING, 42, Tavistock place, Plymouth. Terms cash.

LEAD FOR EXPORTATION.—PIL-LEAD (hard and soft) SOLD at LOW RATES. The BEST PRICE given for LEAD ASHES, &c., and OLD LEAD.—ROUVELL and Co., Southwark Lead Works, Gravel-lane, London.

GREAT WHEAL VOR UNITED MINES.—WANTED, on these mines, a CHIEF CLERK and JUNIOR CLERK, well experienced in mining accounts, and who can furnish good testimonials.—Applications, stating age, to be made to the Secretary, at the office of the company, on or before Monday, the 1st of February.—Gresham House, Old Broad-street, London, E.C., Jan. 21, 1858.

GREAT WHEAL VOR UNITED MINES.—WANTED, an EXPERIENCED CAPTAIN TIN DRESSER, who must have good testimonials.—Applications, stating salary required, to be made to the Secretary, at the offices of the company, on or before Wednesday, the 3d February.—Gresham House, Old Broad-street, London, E.C., Jan. 21, 1858.

GREAT WHEAL VOR UNITED MINES.—WANTED, an EXPERIENCED MINING CAPTAIN as GENERAL MANAGER, to undertake the practical superintendence. He must be of undoubted character, and fully competent to carry on the laborious duties required at three mines.—Applications to be sent, with testimonials, and stating salary required, to the Secretary, at the offices of the company, on or before Wednesday, the 3d February.—Gresham House, Old Broad-street, London, E.C., Jan. 21, 1858.

GOLD MINING COMPANIES.—SHAREHOLDERS in the different CALIFORNIAN and AUSTRALIAN GOLD MINING COMPANIES are requested to CALL on Mr. F. SQUIRE, 74, King William-street, City, that he may submit to them a plan by which the shares in such companies, which are now valueless, will be again marketable.—74, King William-street, City, Dec. 21.

ROYAL SANTIAGO MINING COMPANY.—The Directors hereby give notice, that they expect to receive from the managers at the mines about the middle of next month information which may be of importance to the shareholders, and, consequently, they have POSTPONED the usual HALF-YEARLY MEETING until WEDNESDAY, the 3d day of March next, to be then HELD at the office of the company, at Two o'clock precisely, when the directors will make their report. The Directors also hereby give notice, that the half-yearly accounts and financial statement will be delivered to the shareholders upon application at the office on and after Friday next, the 15th inst.—38, Broad-street-buildings, Jan. 12, 1858.

QUARTZ REDUCTION COMPANY (LIMITED).—Notice is hereby given, that the ANNUAL GENERAL MEETING of the above company will be HELD at the offices, 3, Old Broad-street, City, on Monday, the 1st day of February next, at One o'clock precisely, to receive the directors' report, elect directors in lieu of those who retire from office, and transact general business.

3, Old Broad-street, Jan. 23, 1858. By order, WILLIAM J. VIAN, Sec.

EUROPEAN GAS COMPANY.—Notice is hereby given, that a HALF-YEARLY MEETING of the proprietors will be HELD on Wednesday, the 17th day of February next, at the hour of Two o'clock in the afternoon precisely, at the office of the company, 3, Moorgate-street, London; and that a DIVIDEND of TEN SHILLINGS per share will be PAID on Monday, the 1st February next, and every succeeding day.

By order of the Board, H. McIL BACKLER, Sec.

AIR SHEETING, or BRATTICE CLOTH, made expressly for COLLIERIES PURPOSES, in all widths, from 12 in. to 80 in.—Samples, with price, on application to the manufacturer, ELLIS LEVER, Killmore-place, Stockport-road, Manchester.

CONSOLIDATED COPPER MINES OF COBRE.—At a HALF-YEARLY GENERAL MEETING OF PROPRIETORS OF THE ASSOCIATION, held at the Office of the Company, Gresham House, Old Broad-street, this 25th day of January, 1888.

WALTER SHAIRP, Esq., in the chair.

The advertisement convening the meeting having been read, the following report was read:—

REPORT.

In meeting the shareholders on the present occasion, the directors regret they are unable to report an increase in the produce of the mines, as compared with the statement submitted to them at the last meeting.

The decrease is principally caused by the difficulty still experienced in procuring a sufficient number of labourers to work the mines, and in consequence of a large portion of those engaged being required for the works at the new engine, and in deepening the shaft to enable operations to be carried on in the eastern district of the mines, where the discovery alluded to in recent reports exists.

The rains during last year have been extremely heavy, and have considerably impeded the works, and have prevented the agents from opening much on the side recently cut in the 90 ft. level, fearing, had they done so, the engine might have been overpowered.

The last accounts received state that the bottom of the mine has been under water for some days, and that it was only on the 11th December last that a decrease of 3 ft. was observed, leaving the 150 ft. level still 6 ft. under water.

The quantity of ore raised during last year, to the 30th November, amounted to 12,171 tons, being 1307 tons less than that of the corresponding period of the preceding year. The make of precipitate, however, during the same period is larger, exceeding that of the year 1886 by 36 tons.

The prices realized at 5 p.m. during the last six months have been considerably lower than those obtained at the commencement of the year.

Under these circumstances, the directors are unable to declare a larger dividend than £1 per share, which is now declared payable on the 15th day of February next.

In the last advice received from Cuba, it is stated that the masons are proceeding as rapidly as possible with the engine-house, but that at least three months would be required to complete the house alone.

The directors are using every exertion to obtain a sufficient supply of labourers for the efficient working of the mines. The reports which they receive from their agents lead them still to entertain the same favourable opinions of the ultimate result of the operations now in progress at the mines.

At this meeting two directors, Charles William Grenfell, Esq., and Robert Passenger, Esq., and one auditor, Alexander Druce, Esq., go out of office by rotation, but are immediately re-eligible, and are candidates for re-election, and a ballot for that purpose will be held at the close of the meeting.

It was then moved, seconded, and carried unanimously:—

That the report now read be received and adopted.

That the thanks of the meeting be given to the chairman and directors for their services in conducting the affairs of the company.

The ballot was then proceeded with, when Charles William Grenfell, Esq., M.P., and Robert Passenger, Esq., were re-elected as directors, and Alexander Druce, Esq., as auditor of the company.

CONSOLIDATED COPPER MINES OF COBRE.—Notice is hereby given, that a DIVIDEND OF ONE POUND PER SHARE, free of income tax, will be PAID to the holders of certificates in this company, at the offices of the association, Gresham House, Old Broad-street, on and after Thursday, the 15th day of February next, between the hours of Eleven and Three o'clock. The proprietors must leave their certificates for examination three clear days before the day of payment.

WALTER SHAIRP, Esq., Directors of the Company.

GEORGE WHITMORE, Esq., Directors of the Company.

Gresham House, Old Broad-street, January 26, 1888.

THE CARDIFF PRESERVED COAL AND COKE COMPANY (LIMITED).

Incorporated pursuant to the Joint-Stock Companies Act, 1856.

Capital £20,000, in 4000 shares of £5 each.—Paid up in full at the time of subscription.

REGISTERED OFFICE.—BLACKWELL, CARDIFF.

SECRETARY.—Mr. George Ashcroft.

A manufactory is now erected at Blackwell, Cardiff, and the manufacture and sale of the material commenced.

The patentee has undertaken to manage the works of the company, without remuneration for his time and experience, until dividends at the rate of £10 per cent. per annum are paid to the shareholders. A stipulation to this effect is incorporated in the Articles of Association, which may be seen at the office of the company by persons desirous of subscribing for shares.—a small number only remain on sale.

Specimens may be seen, every information obtained, and references given, at the office of the company, Blackwell, Cardiff, Mr. GEORGE ASHCROFT, secretary, to whom applications for shares should be made. Specimens are also deposited and information obtained from:—

Messrs. W. and G. RICHARDSON, 70, Cornhill, London.

Capt. HARRIS, 68, Cornhill, London.

CHARLES ROSS, Esq., Exchange-street, Liverpool.

Messrs. BARNARD, THOMAS, and Co., Albion Chambers, Bristol.

Messrs. RICHARDSON and Sons, Swansea and Cardiff.

SAMUEL GARDNER, Esq., South.

Capt. PERCY, Jerusalem Subscription Rooms, Cornhill, London.

The material manufactured by this company possesses the following advantages:—

1. It is from 8 to 12 per cent. stronger than any coal from which it may be made.

2. One HUNDRED AND FIFTY SEVEN TONS can be stowed on board ship in the space required for 100 tons of coal.

3. The blocks are of uniform size and weight (56 lbs. each), and they become harder and make a more enduring fire after the lapse of ten or twelve months than when newly made.

TRESAVAN MINE, CORNWALL.

The adventurers having given notice to determine the sett, under a power therein contained, an opportunity offers for a good company, under spirited management, to work this celebrated mine under a new sett; and arrangements may be made in reference to taking the machinery at a valuation.

The mine is so well known that it is almost needless to say that for many years it has been worked at a profit, and has made extraordinary returns to the adventurers, having produced dividends, since the working in 1819, amounting to more than £450,000 (being about one-third of the value of the ore raised), mainly from one lode, known as the Old Lode.

The sett contains many parallel lodes, and there is every prospect, under a prudent and spirited management, of the adventure being a most profitable investment.

For particulars and to treat for the sett, application should be made to RICHARD BOSSAN, Truro, Cornwall.—Truro, Jan. 16, 1888.

INVESTMENTS IN BRITISH MINES.

Full particulars of the most important Dividend and Progressive Mines will be found in the Fourth Edition of

BRITISH MINES CONSIDERED AS AN INVESTMENT.

Recently published, by J. H. MURCHISON, Esq., F.G.S., F.S.S.

Pp. 356; price 3s. 6d., by post 4s.

Mr. Murchison also publishes a QUARTERLY REVIEW OF BRITISH MINING, giving, at the same time, the Position and Prospects of the Mines at the end of each Quarter, the Dividends Paid, &c. The Review for the Quarter ending the 30th of June, contains a Map of the Great Wheal Vor and Lelant Mining Districts, price 1s. Reliable information and advice will at any time be given by Mr. Murchison, either personally or by letter, at his offices, 117, Bishopsgate-street Within, London, where copies of the above publications can be obtained.

OPINIONS OF THE PRESS.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a new and useful publication, and calculated to considerably improve the position of home mine investments.—Mining Journal.

The book will be found extremely valuable.—Observer.

A valuable little book.—Globe.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—Morning Herald.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—Morning Chronicle.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—Leeds Times.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—Derby Telegraph.

To those who wish to invest capital in British mines, this work is of the first importance.—Weisman.

This work enables the capitalist to invest on sound principles; it is, in truth, an excellent guide.—Plymouth Journal.

All who have invested, or intend to invest, in mines, will do well to consult this very useful work.—Ipswich Express.

This is really a practical work for the capitalist.—Stockport Advertiser.

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide.—Warwick Advertiser.

It is full of carefully compiled and reliable information relative to all the known mines in the United Kingdom.—Sheffield Free Press.

Those interested in mining affairs, or who are desirous of becoming speculators, should obtain and carefully peruse the work.—Monmouth Beacon.

Every person connected, or who thinks of connecting himself with mining speculations, should possess himself of this book.—North Wales Chronicle.

A very valuable book.—Cornwall Gazette.

All who have invested, or intend to invest, in mines, should peruse this able work.

We believe a more useful publication, or one more to be depended on, cannot be found.—Plymouth Herald.

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—Peebles Herald.

Mr. Murchison will be a safe and trustworthy guide, so far as British mines are concerned.—Bath Express.

THE PRACTICAL MECHANICS' JOURNAL.

No. 119, February, 1888. 4to., sewed, price One Shilling.

CONTENTS.—Unnecessary Inconveniences which surround Existence, Mechanical Notes from America, Elastic Pantograph for Enlarging and Reducing Drawings, Yarn Winder's Machine (with Plate), Shible's Self-Feeding Tapsails, Brown's Hollow Metal Ware Moulding, Sussex Ironstone, Macfarlane's Continuous-Action Shuttle Loom, &c. Among the recent Patents are—Johnson's Carding, Mann's Horse-power, Loom, &c. Heron's Lifting, Johnson's Preserving Food, Miller's Meters, Tucker's Starch, Macfarlane's Weaving, Robertson's Boiling Range, Hackworth's Blowing Engines, Ross's Valves, White's Weaving; with Reviews, Correspondence, Monthly Notes, and Memoranda, Patent Law Cases, Lists of Patents and Designs Registered, &c. Illustrated with about 50 Woodcuts.

Longman and Co., Paternoster-row; Editor's Office (Offices for Patents), No. 47, Lincoln's Inn-fields.

UNITED STATES OF AMERICA.—DUPEE, PERKINS, and SATLES, BOSTON, MASSACHUSETTS, BROKERS for the PURCHASE and SALE OF STATE, CITY, and RAILROAD SECURITIES, MANUFACTURING and BANK SHARES, give particular attention to the MINING COMPANIES OF LAKE SUPERIOR, and furnish reliable information concerning them.

[DUPEE, PERKINS, and SATLES refer to the Editor of the Mining Journal.]

THURSDAY NEXT.—2795 SHARES IN THE ARUNDELL UNITED COPPER MINES, ASHBURTON, DEVON.

FORFEITED FOR NON-PAYMENT OF CALLS.

MR. MARSH has received instructions to SELL, BY AUCTION, at the Mart, opposite the Bank of England, on Thursday next, the 4th of February, at Twelve o'clock, in Eleven lots, 2795 SHARES (63 per share called and paid) in the ARUNDELL UNITED COPPER MINE, Ashburton, Devon. London offices, 10, Barge-yard Chambers, Bucklersbury.

Particulars may be obtained at the Mart; at the offices of the company; and at Mr. MARSH's office, Charlotte-row, Mansion House.

2425 SHARES IN THE WILDBERG GREAT CONSOLIDATED MINING COMPANY.

MR. MARSH has received instructions to SELL, BY AUCTION, at the Mart, opposite the Bank of England, on Thursday, the 4th of February, at Twelve o'clock, by order of the Trustees, under the authority of the High Court of Chancery, in 163 Lots, 2425 SHARES, of £3 each, fully paid-up, in the WILDBERG GREAT CONSOLIDATED MINING COMPANY.

This company is established under the Prussian law. The mines consist of silver, lead, and copper, and are situated at Wildberg, distant about nine German miles from Cologne. They are in active operation, producing from 120 to 150 tons of dressed silver-lead per month, with a certainty of immediate increase. The silver of the company is at Cologne, with an agency and council of administration in London. The shares are of 13 thalers 10 silver grochen, Prussian money (or £3), each, fully paid-up, in certificates of 13 shares, and 5 shares each, to bearer, without further liability.

Particulars may be obtained at the Mart; at the London Agency of the company, 26, Cannon-street; Messrs. YALLANDE and YALLANDE, solicitors, 20, Essex-street, Strand; of JOHN HARRIS, Esq., solicitor, 22, Argyl-street; and at Mr. MARSH's office, Charlotte-row, Mansion House.

WREY CONSOLS MINE.

MR. HENRY WILLS WILL SELL, BY PUBLIC AUCTION, at his office, 17½, George-street, Plymouth, on Monday, the 8th of February next, at Twelve o'clock at noon, 926 SHARES in WREY CONSOLS MINE, forfeited for non-payment of calls, subject to such conditions as will be produced at the sale.

SOUTH WALES.—MR. ARTHUR O. DAVIES, of Dowlais, is

authorised to TREAT for the SALE of TWO VERY VALUABLE GOING COLLIERIES in South Wales.

Also, to LET, an EXTENSIVE TRACT OF STEAM COAL, on a long lease, at a moderate royalty, with a railway running through the property.

For terms, apply as above.

IMPORTANT TO CAPITALISTS.—IRELAND.

TO BE SOLD, BY PRIVATE CONTRACT, A VERY VALUABLE MINERAL PROPERTY ON CORK HARBOUR.—This comprises an all but inexhaustible supply of the PUREST WHITE SILICEOUS now known in Great Britain or Ireland, and proved to be peculiarly adapted for the finest porcelain and flint glass; CLAYS in great abundance, for coarse earthenware, bricks, tiles, &c.; also, about 20 acres of RICH BROWN HEMATITE IRON ORE, thickness of bed 6 ft. to 8 ft.; with some MANGANESE.

The situation, as regards the exportation of the produce and facilities of working, is, perhaps, unrivalled, and the concern is in good working order. No other part of Ireland can compare with this as a source for an extensive and varied manufacture of earthenware, flint, and even crown glass articles, which, though of vast consumption, are yet still imported.

The brick and tile yard, already established, and capable of great expansion, will yield a large and steady profit. The owner will either enter into partnership, or reinvest a considerable sum in a company (limited), with sufficient capital to develop the great capabilities of these mines.

MR. JAS. DERRING, C.E., Rostellan, near Cork; or Messrs. TUCKER and DUNSCOMBE, solicitors, 54, Grand Parade, Cork; may be applied to for further information.

TO BE SOLD, A VALUABLE COPPER MINE IN DENBIGH-SHIRE.

—Returns hitherto about £15,000; lowest sinking about 15 fms. below adit. All the drivings in good ore ground, and in position to make large and profitable returns. Steam and water-power and buildings in excellent order. Price £1500, for a lease of 21 years, with plenty of ground.—Apply to Mr. BELL WILLIAMS, land agent, 17, Hanover-street, Liverpool.

FOR SALE, at EAST BOSCEAN MINE, ST. JUST, an excellent

30 in. cylinder ENGINE, with boiler, &c., complete.—For particulars and price, apply to Messrs. SAML. HIGGS and SON, Penzance.—Jan. 29, 1888.

FOR SALE, at A CONSIDERABLE SACRIFICE.—THE

TAIVISTOCK IRON COMPANY are requested to SELL a NEW 30 in. cylinder DOUBLE-ACTING BEAM ENGINE, 4 ft. crank, of the best construction, with a 22 ft. diameter fly-wheel, wrought-iron fly-wheel shaft, with cage plate for winding, and a pumping crank; with a 10-ton boiler, having a fire tube through it, with the usual outfit, complete.

N.B. A choice can be made of either boiler whole, or in five parts. Tavistock is four miles from the shipping point.—Apply for terms, &c., to the TAIVISTOCK IRON COMPANY, Tavistock, Devon.—Jan. 23, 1888.

FOR SALE, at THE WATER-WORKS, Lewes-road, BRIGHTON:

A 20-horse power HIGH-PRESSURE TABLE ENGINE, with Cornish boiler, 22 ft. long, 4 ft. 6 in. diameter, and fittings, complete.

A 40-horse CORNISH DIRECT ACTING HIGH-PRESSURE ENGINE, working a plunger pump at the bottom of a well 70 ft. deep.

A 30-horse DIRECT ACTING HIGH-PRESSURE PUMPING ENGINE, erected in 1852 by the celebrated firm of Hawthorne and Co., Newcastle, complete, with pumps, capable of raising 1200 gallons per minute to the height of 250 ft.

Also, a capital STAND PIPE, 50 ft. high, complete, with all connections.

The above are all in good working order, and are to be disposed of in consequence of an entire alteration in the system of water supply. They can be seen on application at the Water Company's Office, Bond-street, Brighton; and full particulars can be obtained of Messrs. KAYSON and AMOS, Grove, Southwark, London, S.E.

NEW LODGE COLLIERY TO BE LET, situated near Pembrey,

Cardiganshire, consisting of several veins of BITUMINOUS COAL, but chiefly of a COLLIERY opened and at work on a vein of about 3 feet thick. The new tenant would have to take to the plant at a valuation, which, with the colliery, would be delivered up in repair, in accordance with the covenants of the existing lease. There is a large copper works and floating harbour connected to the colliery by about one mile of tramroad; the South Wales Railway siding being also in connection with the same. The quality of the coal is suitable for smelting, for smiths' and house purposes, as well as for steam-engines.

For further particulars, apply to Messrs. WATTS, BROUGHTON, and WATTS, solicitors, 15, Great Marlborough-street, W., London; or Mr. GEORGE GOODE, Carnarthen; or Mr. W. F. STAVEY, C.E., Swansea.

STEAM-ENGINES FOR SALE.—8-horse power HORIZONTAL,

9½ in. cylinder, and 16 in. stroke, £80; 6-horse power VERTICAL, 8 in. cylinder, and 12½ in. stroke, £50. The above are quite new, and of the very best workmanship.—Apply to HENRY HUGHES, engineer and hydraulic press manufacturer, Falcon Works, Loughborough.

HYDRAULIC PRESSES FOR SALE.—An 8 in., fitted with

suitable brags, 1 in. and 3 in. diameter, and capable of giving a pressure of 1600 tons, price £25; a 10 in. fitted with 1 in. and 2½ in. brass pumps, and capable of giving a pressure of 3000 tons, price £110. The above are in excellent condition, and, having long lifts, are particularly suitable for packing and pressing goods; they will be warranted for nine months.—Apply to HENRY HUGHES, Falcon Works, Loughborough.

CHOLLACOT CONSOLS MINES.—Notice is hereby given, that a

SPECIAL MEETING of the shareholders in this mine will be HELD at the offices of Mr. W. Nicholson, 57, Old Broad-street, London, on Wednesday, the 3d of February, at One o'clock precisely, for the purpose of considering the propriety of erecting a steam-engine; changing the offices, and altering the management of the company; and making an arrangement as to the deposit of the leases of the mine; and also to consider the expediency of making a call.

JAMES CARPENTER, Purser and Manager.

57, Old Broad-street, London, Jan. 23, 1888.

CHOLLACOT CONSOLS MINES.—Notice is hereby given, that the

ADVERTISING in the Mining Journal of the 23d inst., and signed by JAMES CARPENTER, was INSERTED WITHOUT THE AUTHORITY or CONSENT of the COMMITTEE OF MANAGEMENT; no regulation having been signed by them.

By order, ROBERT DALY, Sec.

16, Union-court, Old Broad-street, Jan. 25, 1888.

CHOLLACOT CONSOLS MINES.—Notice is hereby given to all

merchants, engineers, miners, and others, NOT TO SUPPLY CAPT. JAMES CARPENTER, on behalf of the Chollacot Company, with any ENGINES, MATERIALS, or LABOUR of any kind whatsoever; and that the shareholders of the said company are NOT LIABLE, and WILL NOT BE RESPONSIBLE, for any CONTRACT, DEBT, or LIABILITY, incurred by the said Capt. James Carpenter on account of the said Chollacot Mines.

By order, ROBERT DALY, Sec.

16, Union-court, Old Broad-street, Jan. 25, 1888.

GREAT ORINNIS MINES.

In 6000 shares.—Deposit £1 per share.

A company is being formed to purchase these mines, for the purposes of working them effectually. It is thought that the mines can be obtained for about £4000, with the machinery and all the works as they stand. It is intended to form a company strictly under the Cost-book system, in 6000 shares, deposit £1 per share.

This sum would pay for the mines, £4000, and a steam-engine (say) £1000; leaving £1000 to be applied to assist the labour cost for about three months. Then a call of 5s. per share is recommended, which would assist the cost for four months more. It is thought that the 100 ft. level might be extended to the line of the new run of ore ground discovered in the 80 ft. level in about six months. The 100 ft. level must be driven about 20 fathoms further east, and communicated with Union shaft; and the mine must be completed from the bottom of the 60 to the rise in back of the 80 ft. level.

If the new run of ore should increase in value in the same ratio from the bottom of the 80 to the 100 ft. level as it has from the top of the rise in the back of the 80 to the bottom of that level, it would be one of the most valuable shoots of ore in the county. It is worth £7 10s. per fathom in the top of the rise, about 7 or 8 fms. above the 80, and immediately under, in the bottom of the level, it is worth 30s. per fm. If these works are carried out with vigour it will soon prove a valuable mine.

The old company is in 40,000 shares; therefore, one share in the projected company would equal nearly seven in the old.

Applications for shares, in the annexed form, and further information, can be obtained from Mr. W. CHABLES, 27, Austin Friars, E.C., London, to whom all communications are to be addressed.

GREAT ORINNIS MINES.—To the Provisional Committee.

GENTLEMEN,—I will take shares, or any part thereof, in the new company now being formed for working these mines, in accordance with the printed letter which I have received, and I hereby agree to pay the deposit of £1 per share on or before the 10th of Feb., 1888.

Address,

References,

In the Court of Vice-Wardens of the Stannaries.—Stannaries of Devon.

PURSUANT to an ORDER, or DECREE, made in the Cause of NICHOLS and OTHERS v. BORSWELL.

The CREDITORS in respect of WHEAL LOFES, in the parish of Bickleigh, in the said Stannaries, are, on or before the 15th day of February next, to COME and PROVE THEIR DEBTS before the Registrar of the said Court, at his office at Truro, or in default thereof they will be peremptorily excluded the benefit of the decree.—Dated Registrar's Office, Truro, Jan. 25, 1888.

Creditors are to make their claims by affidavit, which must be filed at the Registrar's office, at Truro, and may be sworn before any solicitor in Devon or Cornwall who is a Commissioner for taking affidavits in the Court of the Vice-Wardens of Stannaries.

In the Court of Chancery, Ireland.

In the Matter of the JOINT-STOCK COMPANIES WINDING-UP ACTS, 1848 and 1849, and of the MIZEN HEAD COPPER MINING COMPANY.

PURSUANT to my ORDER made in this Matter, bearing date the 15th day of May, 1887, I, the MASTER charged with the winding-up of the company, will, on Wednesday, the 3d day of February, 1888, at the hour of 1 o'clock in the afternoon, at my Chambers, Inns Quay, in the City of Dublin, O'UP and SELL to the highest and fairest bidder, ALL that and those the MIZEN HEAD COPPER MINES, situate in the barony of West Cork, and county of Cork, in the petition in this matter mentioned.

Dated this 21st day of November, 1887. WILLIAM BROOK, Descriptive Particulars.

The Mizen Head Copper Mines are held under licence bearing date the 23d day of February, 1853, for a term of 31 years, from the 1st of November, 1852, subject to the royalty of 1-18th of the clear profits thereof, and situate in the extreme south-west of Ireland, about sixteen miles from the town of Skull, and seven from the safe harbour of Crookhaven. Considerable sums of money have been expended in sinking shafts, machinery, &c.; but the mines, which, in the report of competent judges, are considered very eligible, have been but partially and inefficiently worked.

For further particulars, rentals, and conditions of sale, apply to AGUILETA Esq., the official manager, 121, Lower Baggot-street; EDWARD JOHN BOLTON, solicitor, having carriage of sale, 67, Stephen's-green South; MURDOCK GERRARD Esq., solicitors for contributors, 32, Lower Baggot-street; MICHAEL LARKIN, Esq., solicitor for petitioner, 1, Merchants' Quay; TIMOTHY MCCARTHY DOWLING, solicitor, Skibbereen, and 7, Inns Quay; and to MICHAEL JOHN GREENHOUGH, solicitor, Lincoln's Inn-fields, London.

VICE-CHANCELLOR WOOD, at CHAMBERS.

MORE STEAM, BETTER FIRES, AND LESS SMOKE.
For Marine, Stationary, and Locomotive Boilers, Mr. LEE STEVENSON'S PATENT REGULATING AIR-DOORS are found to be the most effective invention for increasing Steam, and promoting Ventilation and Draught; and, with his other appliances for Reverberatory, Pottery Kilns, and Furnaces of every peculiarity of construction, constitute a series of improvements for generating heat, economising fuel, and preventing smoke, which accomplish all practical requirements. Testimonials, terms, &c., obtained at 1, FISH STREET HILL, CITY, LONDON, E.C., where information is also given of his improved PATENT GRATES, in which the fire can be kindled at the top or the bottom, so as to produce either slow or brisk combustion, with less smoke than in any other open fire-places.

OVERLAND ROUTE.—WEEKLY COMMUNICATION BY STEAM TO INDIA, &c., VIA EGYPT.
The PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS AND RECEIVE GOODS AND PARCELS for the MEDITERRANEAN, EGYPT, ADEN, OCEAN, MADRAS, CALCUTTA, the STRAITS, CHINA, and MANILLA, by their steamers leaving Southampton on the 4th and 20th of every month; and for the MEDITERRANEAN, EGYPT, ADEN, and BOMBAY, by their steamers leaving Southampton on the 11th and 27th of the month.
For further particulars, apply at the company's office, No. 121, Leadenhall-street; and at Oriental-place, Southampton.

STEAM UNDER SIXTY DAYS ECLIPSED.
The MARCO POLO of this line sailed with the steam-ship ROYAL CHARTER from Melbourne, and arrived in Liverpool eight days before her.

PASSAGE MONEY \$14 AND UPWARDS.

BLACK BALL LINE BRITISH AND AUSTRALIAN EX-ROYAL MAIL PACKETS.

Appointed to sail from LIVERPOOL on the 5th and 12th of each Month, FOR MELBOURNE.

Forwarding Passengers by Steam to various Ports in AUSTRALIA AND TASMANIA.

Ship.	Register.	Burthen.	Captain.	Date.
SCOTTISH CHIEF	1953	3000	BUCAN	5th February.
JAMES CHESTON	1073	3000	BYAN	13th February.
MARCO POLO	1825	3500	CLARK	5th March.
NEW SHIP	1200	3000	—	12th March.
DONALD M'KAY	3594	3000	MUNDIE	5th April.
GREAT TASMANIA	3140	4500	BARNES	To follow.

The above line is composed of the LARGEST, THE FINEST, AND FASTEST MERCHANT SHIPS IN THE WORLD, and have been built by the most celebrated builders of the day, including M'Kay, of Boston. They are commanded by men who have already rendered themselves famous, and their equipments and accommodations are unequalled by any line of ships afloat.
The Black Ball Line has had the distinguished honour of a visit from Her Majesty the Queen, who was most graciously pleased to say that she had no idea there were such magnificent ships in her merchant navy.
Freight and passage, apply to the owners, JAMES BAIRD and Co., Liverpool; or to T. M. MACKAY and Co., 2, Moorgate-street, London, E.C.

PUMPING AND WINDING ENGINES.—FOR SALE, an excellent 50 in. PUMPING ENGINE, 10 ft. stroke, two boilers 10 tons each, in perfect condition, nearly new, with 80-horse power. A 24 in. WHIM HORIZONTAL ENGINE, with 10 tons boiler, nearly new, in excellent condition, and drawing machine attached.
As these engines are very superior in make and condition, parties requiring engines will do well to examine them.—Apply to Mr. C. WATSON, 21, Southwark, Exeter.

TO ENGINEERS, SHIP-BUILDERS, AND OTHERS INTERESTED IN SHEET-IRON STRUCTURES.

BERTRAM'S PATENT WELDING PROCESS.—THIS SIMPLE AND EFFICIENT PROCESS FOR UNITING WROUGHT-IRON PLATES in the construction of Marine, Locomotive, and Land Boilers, Ships, Boats, Calsones, Tanks, Pans, Bridge Beams, Girders, and Sheet-Iron Structures generally, by WELDING instead of RIVETING, combines, with great ECONOMY OF LABOUR AND MATERIAL, the certainty of greatly INCREASED STRENGTH, PERMANENT SOUNDNESS, and FREEDOM FROM LEAKAGE.

This invention having been most satisfactorily tested, the patentee is prepared to GRANT LICENSES for the use of his PROCESS; and invites the inspection of a HIGH-PRESSURE TUBULAR BOILER, which has been constructed under his immediate direction, and may be seen at the works of the VICTORIA FOUNDRY COMPANY, engineers and ship-builders, Greenwith.

Applications for licenses, and particulars of works required, may be obtained at the office, 12, Buckingham-street, Adelphi, W.C., where samples of the welding may be seen. The welding furnaces will be supplied by the patentee's agent.

PATENT WIRE ROPES, ONE-HALF THE COST OF HEMP ROPES.

HENRY J. MORTON AND CO.'S (2, BASINGHALL BUILDINGS, LEEDS) PATENT WIRE ROPES, for the use of MINES, COLLIERIES, RAILWAYS, &c.; one-half the weight of hemp rope, and one-third the cost; one-third the weight of chains, and one-half the cost—in all deep mines these advantages are self-evident. References to most of the principal colliery owners in the kingdom.

GALVANISED SIGNAL CORDS AND KNOCKER LINES. will not rust or corrode, and are not affected by the copper wire in mines. Very strong, and not at all liable to break. Prices from 15s. per 100 yards.

PATENT ASPHALTED ROOFING FELTS, 14. per foot.
DRY HAIR BOILER FELTS, saving 25 per cent. of fuel.
PATENT BOILER COMPOUND, for bad water.
FAIRBANK'S WEIGHING MACHINES, of all sizes.
GALVANISED IRON ROOFING AND SPOUTING.
PATENT FLEXIBLE STEAM PACKING, 1s. 3d. per lb.
PATENT METALLIC PACKING, 4s. per lb.
PATENT AMERICAN DRIVING BANDS, much cheaper and more durable.
FLAX ROPE PIPES, for water, &c., one-fourth the price of leather hose.
PATENT GALVANISED AIR-PIPES, for ventilation.

STOCK OF MINING AND RAILWAY STORES in Liverpool and London:—VIA OILS, GREASES, COITON WASTE, SPUN YARN, WHITE LEAD, VARNISHES &c.; and at very low prices.—Address, 2, Basinghall-buildings, Leeds.
N.B. Illustrated price list on application.

MOST IMPORTANT TO COLLIERY OWNERS AND COLLIERY MANAGERS.

HENRY J. MORTON AND CO., GALVANISED IRONWORKS, 2, BASINGHALL BUILDINGS, LEEDS, beg to call attention to their IMPROVED SIGNAL BELLS, especially prepared to meet the requirements of the new Act for the Inspection of Coal Mines. It has met with the decided approval of many large colliery owners and managers. SIMPLE, EFFICIENT, and CHEAP. Price 15s., 17s. 6d., and 20s. each.

BYAM'S PATENT ANEMOMETER, for testing the ventilation. Price £2 5s. to £4 5s. each.

STEAM PRESSURE GAUGES, very strong and accurate, £2 and £2 12s. 6d. each. For further information, apply to H. J. MORTON AND CO., 2, Basinghall-buildings, Leeds.

FAIRBANK'S IMPROVED PATENT WEIGHING MACHINES, for the use of IRONWORKS, COLLIERIES, RAILWAYS, WAREHOUSES, STORES, &c.

The most ACCURATE MACHINES in use, and the cheapest. MACHINES of all sizes, from 1 cwt. to 30 cwt., for RAILWAY WAGONS, CARTS, and WAGONS.

For prices and all other information, apply to HENRY J. MORTON AND CO., GALVANISED IRONWORKS, 2, BASINGHALL BUILDINGS, LEEDS.

PATENT COMBINED GAS WORKS, OF ALL SIZES, for the use of PRIVATE HOUSES, MANSIONS, RAILWAY STATIONS, MILLS, COLLIERIES, VILLAGES, MINES, &c.

WORKS of all sizes, from 10 lights to 500 lights, estimated for. The construction is so simple, that the works can be entrusted to the management of an ordinary labourer or servant. FOR LIGHTING CORNISH MINES these works are well adapted, and at a cost of one-half below the usual outlay.—Apply to HENRY J. MORTON AND CO., GALVANISED IRONWORKS, 2, BASINGHALL BUILDINGS, LEEDS.

SOLE LICENSEES AND AGENTS.

THE LONDON WINE COMPANY LIMITED.
With power to raise capital to the extent of £100,000.

CHIEF OFFICES AND CELLARS, 43 AND 41, LIME STREET.
BRANCH OFFICE AND CELLARS, 1, PRINCES STREET, REGENT STREET.

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS, IN STOCK.—FOR SALE OR HIRE.

RAILWAY, MINERAL, AND OTHER WAGONS ON HIRE.
Apply to the LANCASHIRE WAGON COMPANY (LIMITED), Bury.

THE RAILWAY CARRIAGE COMPANY, OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.

NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK, FOR SALE OR HIRE.
LONDON OFFICES.—34, GREAT GEORGE STREET, WESTMINSTER.

THE PERMANENT WAY COMPANY GRANT LICENSES for the USE OF ALL THE IMPORTANT IMPROVEMENTS in the PERMANENT WAY OF RAILWAYS. They undertake their inspection during the process of manufacture; and, in the case of cast-iron sleepers, guarantee their durability on terms which effect an important reduction in the cost of renewal. Every information will be given on application to W. HOWDEN, Sec. 26, Great George-street, Westminster.

JOHN ROGERSON AND CO., NEWCASTLE-ON-TYNE, AND MIDDLESBROUGH-ON-TEES.
FIG, BAR, PLATE IRON, CHAINS, ANCHORS, FORGINGS, GIRDERS, PIPES, FOUNDRY WORK.

LONGBRIDGE'S WEST HARTLEY STEAM COALS (on the Admiralty List), COKING, GAS, HOUSE, AND SMITHS' COALS, COKE, FIRE-BRICKS, &c.

BURGIN AND WELLS, STEEL CONVERTERS AND REFINERS, MANUFACTURERS OF RAILWAY CARRIAGE AND WAGON SPRINGS, IMPROVED CAST-STEEL FILES, &c.
HOLLIS CROFT STEEL WORKS, SHEFFIELD.

JOHN H. PECK, MANUFACTURER OF RAILWAY OIL COVERS, CART AND WAGON COVERS, OIL CLOTH, STACK COVERS, COKE AND CORN BAGS, POTATO BAGS, TWINE, &c., WIGAN.
LONDON AGENT.—T. E. WILKIN, 15, Duke-street, Adelphi.

CALVERT'S PATENT PROCESS FOR MAKING COKE AND IRON FREE FROM SULPHUR.
For LICENSES TO USE the above process, apply to ROBERT LONDON, Jun., 63, King-street, Manchester.

FOR APPLICATION OF THE PATENT TO GAS WORKS, apply to Mr. GEORGE TAYLOR, Exchange Chambers, Manchester.

SHORTBRIDGE, HOWELL, AND JESSOP, HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS BOILER-PLATE METAL, combining the strength and durability of steel with the malleability of copper; warranted to bear double the pressure of the best boiler-plate iron; RIVETS, ANGLES, AND STAYS of the same material. Also, RUSSELL AND HOWELL'S PATENT CAST-STEEL TUBES, for multitubular boilers, shafting, railway axles, &c.

Application to be made to SHORTBRIDGE, HOWELL, AND JESSOP, Hartford Steel Works, Sheffield; and Messrs. HARVEY AND CO., 13, Haymarket, London.

CONDIE'S PATENT STEAM HAMMERS.—FIRST-CLASS STEAM HAMMERS, from 10 cwt. to 7 tons, suitable for jobbing forges, puddling forges, engineers, ship-builders, wagon builders, smiths, &c., made under the subscriber's personal superintendence.
JOHN CONDIE.
Govan Bar Ironworks, Glasgow.

MESSRS. R. & J. COUPE, ENGINEERS AND IRONFOUNDERS, MANUFACTURERS OF HORIZONTAL HIGH-PRESSURE STEAM-ENGINES, from 10 to 500-horse power; the larger description of engines mounted with their improved EQUILIBRIUM STEAM VALVE, which has proved itself so eminently adapted for winding and other engines.
Clayton Foundry, Wigan.

STEAM PUMPS, FOR LAND AND MARINE PURPOSES, SINGLE OR DOUBLE ACTING; sizes from 2½ to 12 in. diameter, and from 4 to 18 in. stroke; by JOHN CAMERON. Used for feeding boilers, raising water for reservoirs, tanks, irrigation, &c.; turning power, or as a steam fire engine.
Works, Egerton-street, Hulme, Manchester.

IMPROVED APPLICATION OF WATER-POWER. TURBINES OR HORIZONTAL WATER-WHEELS.—MAC ADAM, BROTHERS, AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, propose to SUPPLY AND ERECT these WHEELS on any height of fall, and for driving any kind of machinery. They have been engaged in making them for the last ten years, and have erected them in many parts of Ireland, and lately at the Laxey Lead Mines, Isle of Man, and at Eggleston Mills, near Barnard Castle. They give a much higher percentage of power than the best vertical water-wheels, are cheaply connected to other machinery, and on low falls are not affected by floods or back-water. Further particulars will be given on application.

PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL WAS AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and FAYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate. Address.—BICKFORD, SMITH, DAVEY, and FAYOR, Tuckermill, Cornwall.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON AND CO., PEN-HALLICK, near REDRUTH, CORNWALL, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and applied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe. Messrs. BRUNTON AND CO. are at all times PREPARED TO EXECUTE UNLIMITED ORDERS FOR SUPPLYING FUSE direct from their own MANUFACTORY, upon warrant that it will prove equal to, if not better, than any to be procured elsewhere.

ELLIS LEVER, KILNMEER PLACE, STOCKPORT ROAD, MANCHESTER, AGENT TO DAVIS FENTON AND CO., QUEEN'S FERRY, FLINT, WIRE DRAWERS, AND MANUFACTURERS OF IMPROVED PATENT ROUND AND FLAT WIRE ROPE, FOR MINING, RAILWAY, AND GENERAL PURPOSES.
A complete stock of every description kept at the Liverpool depot, 6, Wapping.

THOS. GEMMELL AND CO., WIRE ROPE MANUFACTURERS, WORKS, FIBRILL ROAD, SPRINGBANK, GLASGOW.
WARRINGTON, 4, QUEEN'S ROAD, GLASGOW; 10, KING-STREET, LIVERPOOL; 43, MARSHALL-STREET, ABERDEEN; 46, OSBORN-STREET, HULL.

HENRY J. MORTON AND CO., 2, BASINGHALL BUILDINGS, LEEDS.
GEORGE OUTRIM, Liverpool-road, Stoke-upon-Trent.
ISAAC NAYLER, Didsdale, near Dunsdale.
J. WADDINGTON, 109, Millgate, Wigan.
THOMAS REID, 33, Quay-side, Newcastle-upon-Tyne.

ARNOLD AND SONS, WIRE WORKERS, WEAVERS, AND IRONFOUNDERS TO HER MAJESTY.
Nos. 9, 12, and 13, FORD STREET, DEVONPORT, DEVON.

ARNOLD AND SONS being MANUFACTURERS OF WIRE WORK, can with confidence ensure the strongest and best quality goods to all who entrust orders to their care. MINES SUPPLIED with Brass and Iron Wire Sieves, Brass Machine Bottoms, Iron Cylinder Sifts, Copper Bottoms, Stamp Grates, Deleving Serges, &c.

MINING MATERIALS of every description supplied on the best terms.
Price Lists sent on application.

Assays and Sows have a very extensive Stock of Furnishing, Navy, Army, and General Ironmongery.—Devonport, Three Doors above the Post-office.

ASPHALTE OR PITCH, 4s. per ton; TAR OIL, 2d. per gallon; COMPOSITION TO PREVENT RUST IN STEAM BOILERS, 10d. per gal; J. NO. METCAL'S, Miles Plating Chemical Works, Manchester.

ASSAY OFFICE AND LABORATORIES, DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT, LONDON.
Conducted by JOHN MITCHELL, F.C.S., Author of "Manual of Practical Assaying," Metallurgical Papers, &c.

Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c. For amount of fees, apply to the office, as above.

GUARANTEED PATENTS.—The present practice of granting patents for inventions without examination or discrimination renders their validity and consequent value doubtful and uncertain; and, as the number of applications for patents annually increases, the risk of collision and of anticipation becomes greater. To remedy these evils, the UNDERIGNED are prepared to GUARANTEE BY BOND THE NOVELTY AND VALIDITY OF PATENTS PROCURED AND SPECIFIED BY THEM, on terms which may be known on application.
BARLOW AND CO., Patent Office, 89, Chancery-lane, London.

NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated Patent Law Reform before the Government and Legislature, and in the pages of the Mining Journal, &c., is now READY TO ADVISE AND ASSIST INVENTORS IN OBTAINING PATENTS, &c., under the NEW ACT.
The Circular of Information, gratis, on application to the Patent Office and Designs' Registry, 156, Strand.

MESSRS. KNOWLES AND BUITON, CHESTERFIELD MANUFACTURERS OF PATENT TUBULAR TUYERES,



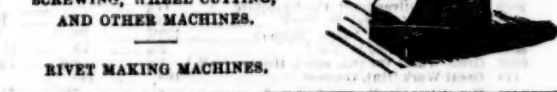
HOT-BLAST FURNACE TUYERES, with sockets, 36s. each, without sockets, 25s. each; SMITH'S FORGE TUYERES, with sockets, 18s. each, without sockets, 12s. each; delivered at Chesterfield Station.

HALEY'S PATENT LIFTING JACK,
MANUFACTURED BY THE INVENTOR,
JOSEPH HALEY,
ALBION STREET, GAYTHORN, MANCHESTER.

SCREW JACKS, SHIP JACKS.

SLIDE AND CENTRE LATHES, PLANING, SHAPING, BORING, DRILLING, SCREWING, WHEEL CUTTING, AND OTHER MACHINES.

RIVET MAKING MACHINES.



TO PREVENT ACCIDENTS BY WINDING OVER THE HEAD GEAR, USE THE PATENT SELF-ACTING STEAM BREAK, which at every lift from the mine shuts off the steam from the winding engine and applies the break, also records the number of lifts made.—For illustrated circular and p. 10s, apply to MESSRS. GUNTER, engineer, St. Mary's, Manchester.

GUTTA PERCHA BANDS, TUBING, &c.—Our BANDS, carefully MANUFACTURED from the VERY BEST GUTTA PERCHA only, are considerably CHEAPER, and, when fairly worked, are far more DURABLE than LEATHER. Can be had in lengths of 100 or 120 ft. without a joint, are easily joined or repaired, and, when worn out, re-purchased by us at about one-third of their original cost. In the event of a break down, a band of any size can be supplied within a few hours of receipt of order. The present prices are as under:—

Bands ¼ in. thick and upwards to ½ in. ... 2s. 6d. per lb.
Bands above ½ in. thick ... 2s. 2d. per lb.
Subject to a liberal discount for cash, varying according to quantity. TUBING and other articles equally low. All our patented manufactures are to be obtained wholesale from our own works; retail from any of our dealers.

THE WEST HAM GUTTA PERCHA COMPANY.
West-street, Smithfield, London, E.C.

VULCANIZED INDIA RUBBER MACHINE BANDING is not affected by wet, heat, or cold; does not stretch nor slip on the pulleys. HOSES for BREWERIES, &c., will not impart taste, smell, or colour; also, for conducting, or steam purposes. VALVES, WASHERS, PACKING, &c., IN STOCK.—Prices and testimonials on application to DODGE and GRADONATI (late Dodge, Bacon, & Co.), 44, St. Paul's Church-yard, London, E.C.

LEATHER MILL BANDS, HOSE PIPES, BUCKETS, &c.—RAILWAY COMPANIES, ENGINEERS, CONTRACTORS, and BUILDERS, can be SUPPLIED with the above articles of the very best quality, and on the shortest notice. PUMP BUTTS, and every other description of leather always on hand.—Apply to J. HOLGATE and Co., curriers and leather merchants, 33, Great Dover-road, London, S.E. WHOLESALE HARNES MANUFACTURERS.

TO ENGINEERS, MILL OWNERS AND OTHERS.



VULCANIZED AND UNVULCANIZED INDIA RUBBER IN EVERY FORM. ELASTIC CANVAN AND INDIA RUBBER STEAM PACKING. Buffer, Bearing, and Carriage Springs, Valves for Marine and Land Engines, Tubing and other Appliances for Scientific purposes.

IMPORTERS OF AMERICAN BELTING, BREWERS' HOSE, &c.
S. W. SILVER AND CO., 3 and 4, Bishopsgate-street, opposite London Tavern.

GLENFIELD PATENT STARCH, USED IN THE ROYAL LAUNDRY, AND FURNISHED BY HER MAJESTY'S LAUNDRESSES TO BE THE FINEST STARCH SHE EVER USED.
Sold by all chandlers, grocers, &c.

KEATING'S COUGH LOZENGES.—For half a century this well-known REMEDY for PULMONARY DISORDERS has successfully stood the test of public approval, and their usefulness has been extended to every clime and country of the civilized world. They may be found alike on the gold fields of Australia, the back woods of America, in every important place in the East or West Indies, and in the palace of Pekin. During this long period they have withstood the pretensions of numerous inferior rivals, and are now the acknowledged ANTIDOTE for COUGHS, COLDS, ASTHMA, &c.

Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by THOMAS KEATING, Chemist, &c., 79, St. Paul's Church-yard, London. Retail by all druggists and patent medicine vendors in the world.

AN ACT OF GRATITUDE.
Five Thousand Copies of a Medical Book for Gratuitous Circulation.

GEORGE THOMAS, Esq., having been EFFECTUALLY CURED of a NERVOUS DEBILITY, LOSS OF MEMORY, and DIMNESS OF SIGHT, resulting from the early errors of youth, by following the instructions given in a medical work by a physician, he considers it his duty, in gratitude to the author, and for the benefit of nervous sufferers, to publish the means used. He will, therefore, send free, to any address, in a sealed envelope, on receipt of a directed envelope enclosing two stamps, to pre-pay postage, a copy of the medical work, containing every information required.—Address, G. THOMAS, Esq., Craven House, Newcastle-upon-Tyne.

THE SECRET INFIRMITIES OF YOUTH AND MATURITY.
Just published, price One Shilling; post free, in an envelope, for 13 stamps.

SELF-PRESERVATION; a Medical Treatise on the Cure of Nervous and Generative Debility, resulting from vicious habits acquired during the critical passage from youth to manhood, with Practical Observations on the Physiology of Marriage, in its social, moral, and physical relations. To which are added, Remarks on the Wonders of the Microscope in revealing the hidden mysteries "of life within life," and its advantages in detecting, by urinary examination, the cause and effect of every variety of these complaints, with numerous engravings and cases. By SAMUEL LA'MAR, M.D., 37, Bedford-square, London.

Also, by the same Author, price 1s.; free by post for 13 stamps. **THE SCIENCE OF LIFE; or, How to Ensure Moral and Physical Happiness.** Published by J. Allen, 20, Warwick-lane, Paternoster-row; and may be had of Mann, 39, Cornhill; Horne, 19, Leicester-square; Gordon, 146, Leadenhall-street; or from the Author, who may be consulted daily, from Eleven till Two, and from Six till Eight, at his residence, 37, Bedford-square, London.

THE GREAT EUROPEAN REMEDY FOR NERVOUSNESS, RELAXATION, AND EXHAUSTION.
Protected by Royal Letters Patent, and sanctioned by all the great Continental Colleges of Medicine.

DR. DE ROOS' CELEBRATED GUTTE VITE, OR LIFE DROPS, are the great European remedy for Spermatorrhoea, Exhaustion, Nervousness, Debility, Incapacity for Society, Study, or Business, Shaking of the Hands and Limbs, Indigestion, Flatulency, Shortness of Breath, Consumptive Habits, Dimness of Sight, Discharges, Pains in the Head, Eruptions, Blisters, Pimples, a Sore Throat, Pains in the Bones and Joints, Scoury, Scrofula, and all those diseases for which mercury, sarsaparilla, &c., are not only employed in vain, but too often to the utter destruction of the sufferer's health. Their almost marvellous power must be felt to be believed. Hundreds of apparently hopeless cases, which had been given up by the faculty, have been speedily cured, and many thousands have derived almost miraculous relief, when everything else had signally failed.

Price 11s., and four times the quantity 33s. per bottle, obtainable through all medicine vendors; or of whom also may be had the "Medical Adviser," 2s. 6d. in sealed envelope; or it may be sent direct from the author for 42 penny stamps.

Advice and medicines sent to any address secure from observation, on receipt of a full detail of the case and the usual fee of £1. Post-office orders payable at the Holborn Office to Walter De Roos, M.D., 10, Berner-street, Oxford-street, London. Hours for personal consultation daily from Eleven till Four, Sundays excepted.

N.B. Should difficulty arise in procuring the above, enclose the amount per Post-office order, or otherwise, to 10, Berner-street, and they will be sent securely packed per return.

HOLLOWAY'S PILLS.—ANOTHER WONDERFUL CURE OF ASTHMA.—Extract of a letter from Mrs. Ann Jones, Lord-street, Liverpool, to Prof. Holloway:—"I was seriously afflicted for five years with asthma, frequently expectorating blood, palpitation of the heart, together with faintness and cold sweat. In this state I continued for several months. I consulted the faculty until all hope of relief vanished, when I was prevailed upon to give your pills a trial; under their influence this terrible malady quickly disappeared, and my health is now re-established."—Sold by all medicine vendors throughout the world; at Prof. Holloway's establishments, 344, Strand, London, and 80, Maiden-lane, New York; by A. Stamp, Constantinople; A. Gaiday, Smyrna; and E. Mair, Malta.

THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5120	Alfred Consols (cop.), Phillack (S.E.). 31. 11s. 10d.	413	14 14	14 14	£15 10	40 40-Dec. 7, 1857.
1024	Ballewidden (tin), St. Just	111	4	4	12 50	0 50-Jan. 1, 1858.
4000	Bedford United (copper), Tavistock	37. 6s. 3d.	6 6	6 6	9 16 6	0 50-Dec. 19, 1857.
240	Boscan (tin), St. Just	20	70	70	21 00	0 50-Sept. 4, 1857.
300	Botallack (tin, copper), St. Just	91	180	180	418 50	0 50-Dec. 16, 1857.
1200	Brightside and Progress Grove, Derbyshire	3	4	4	3 00	0 50-Apr. 16, 1856.
1000	Bryntall, Llanidloes, Montgomeryshire	7	2	2	0 50	0 50-July 1, 1856.
420	Buddick Consols (tin), Ferran	2	1	1	0 10 0	0 10-Mar. 26, 1857.
630	Bwlch (silver-lead), Cardiganshire	1	1	1	0 30	0 20-July 30, 1856.
4000	Calstock Consols (copper)	5	5	5	0 26	0 26-Dec. 23, 1857.
1000	Carra Brea (copper, tin), Illogan	15	45	45	337 100	0 20-Nov. 11, 1857.
3048	Carnarvon (tin), St. Just	15	5	5	0 15 0	0 30-June 16, 1856.
300	Cefn Gwyr Brynno (lead), Cardiganshire	33	55	55	43 30	0 30-Oct. 4, 1855.
3000	Collaumb (copper)	5	16	14 15	3 50	0 50-Dec. 2, 1857.
256	Condurow (copper, tin), Camborne (S.E.)	30	90	80 85	85 00	0 20-June 10, 1857.
1055	Craddock Moor (copper), St. Cleer	8	40	37 40	0 17 0	0 50-Jan. 8, 1858.
30000	Craven Moor, Limited (lead), Yorkshire	60	180	180	105 00	0 50-Feb. 28, 1856.
128	Cwmystwith (lead), Cardiganshire	1	1	1	0 20	0 50-Dec. 16, 1857.
280	Derwent Mines (silver-lead), Durham	300	150	150	122 00	0 10-June 23, 1857.
1024	Devon Great Consols (cop.), Tavistock (S.E.)	425	425	425	425 00	0 70-Jan. 22, 1857.
173	Ding Dong (tin, copper), St. Just	33	17	17	16 7 8	0 10-May 5, 1857.
678	Dolobath (copper, tin), Camborne	357	300	200 225	943 00	0 30-Oct. 12, 1857.
13800	Drake Walls (tin, copper), Calstock	11. 10s.	1	1	0 13 6	0 30-Sept. 11, 1857.
300	East Daren (lead), Cardiganshire	33	100	100	36 00	0 30-Dec. 10, 1857.
3048	East Falmouth (lead)	3	4	4	0 7 6	0 20-Jan. 25, 1858.
138	East Pool (tin, copper), Pool, Illogan	34	340	150 300	205 00	0 30-Dec. 28, 1857.
1024	East Wheal Margaret (tin, copper)	7	3	3	0 50	0 50-Jan. 11, 1854.
4700	Exmouth (silver-lead)	47. 14s.	8	8	3 7 6	0 20-Dec. 23, 1857.
1400	Fyarn Mining Company (lead), Derbyshire	5	55	54 56	15 13 4	0 10-Dec. 26, 1857.
4940	Fowey Consols (copper), Tynardreath	4	7	7	41 43	0 50-Feb. 17, 1857.
4448	General Mining Co. for Ireland (cop., lead)	4	2	2	1 0 8	0 30-June 5, 1853.
1024	Goginan (silver-lead), Cardiganshire	11	15	2	22 00	0 50-Sept. 5, 1856.
1024	Gomans (copper), St. Cleer	13	15	10 12	0 7 6	0 70-Dec. 21, 1857.
248	Graham and St. Agnes (copper)	100	90	100	0 50	0 50-May 5, 1857.
6000	Great South Tolu (S.E.)	215	15	15 15	1 9 6	0 50-Dec. 17, 1857.
6000	Great Wheal Vor (tin, cop.), Helston (S.E.)	8	1	1	0 50	0 50-Oct. 23, 1853.
119	Great Work (tin), Gernoe	100	140	140	221 100	0 70-Feb. 27, 1857.
1024	Herodfoot (lead), near Liskeard	8	7	7	3 15 0	0 12-Jan. 29, 1858.
6000	Hingston Down Consols (copper), Calstock	3	3	3	2 16 0	0 20-Nov. 25, 1856.
3000	Holyford (copper), near Tipperary	11	8	8	4 2 6	0 50-Jan. 28, 1857.
2580	Ile of Man (Limited)	25	42	42	55 17 3	0 10-Dec. 16, 1857.
78	Jamaica (lead), Mold, Flintshire	31. 10s. 6d.	—	—	380 00	0 50-Mar. 10, 1861.
30	Laxey Mining Company, Isle of Man	1000	1000	1000	1420 00	0 50-June 30, 1857.
180	Levant (copper, tin), St. Just	90	90	90	1062 00	0 40-May 12, 1857.
1000	Lewis Mines (tin, copper), St. Erth	61. 11s. 4d.	—	—	0 10 0	0 10-Dec. 20, 1855.
400	Liaburne (lead), Cardiganshire, Wales	130	130	130	304 100	0 30-Dec. 3, 1857.
6000	Marke Valley (copper), Cardigan	47. 10s. 6d.	2	2	0 5 6	0 30-Sept. 7, 1855.
6000	Mendip Hills (lead), Somerset	3	1	1	1 7 6	0 50-May 29, 1857.
1800	Merrilyn (lead), Flint	3	3	3	1 11 0	0 20-June 23, 1853.
1800	Minera Mines (copper, lead, coal)	30	90	16 24	34 2 6	3 2-Nov. 11, 1857.
30000	Minning Co. of Ireland (copper, lead, coal)	7	18	15 14	13 7 9	0 13-Jan. 7, 1858.
5000	Nantow and Penrhyn, Limited (23 1/2 shares)	2	1	1	0 1 6	0 10-Apr. 30, 1855.
4700	Nether Heath, Westmoreland	2	1	1	0 1 6	0 10-Apr. 21, 1855.
4000	Newtowns Mining Company, Co. Down	20	35	35	48 00	0 10-Oct. 17, 1856.
700	North Pool (copper, tin), Pool	362. 10s. 3d.	70	60 70	324 00	0 20-Dec. 26, 1854.
700	North Rosebar (copper), Camborne	11	22	23 25	750 00	0 40-Sept. 26, 1853.
6000	North Wheal Bassett (cop., tin), Illo. (S.E.)	14	14	14 15	13 19 0	0 50-Oct. 28, 1857.
6400	Par Consols (copper), St. Blazey (S.E.)	1	1	1	31 40	0 10-Oct. 27, 1857.
300	Peak United (lead), North Derbyshire	7	2	2	4 10 0	0 10-Apr. 12, 1856.
300	Phoenix (copper, tin), Linkinghorpe	100	370	370	244 100	0 20-Nov. 1857.
1000	Polbarro (tin), St. Agnes (Froelant)	15	—	—	18 11 9	0 10-July 11, 1857.
1772	Do. Do.	15	—	—	0 10 0	0 10-Dec. 13, 1857.
5000	Providence Mines (tin), Ury Lelant	13s. 2d.	62	65	70 10 0	0 40-Nov. 13, 1857.
2500	Rhowydyol and Bachellion (lead)	11	12	12	0 13 0	0 30-Oct. 21, 1857.
512	Rosewarne United (copper, tin), Gwinnar	12	22	25 22	33 10 0	0 10-June 8, 1857.
12000	Scotridge Consols (cop.), Whitechurch (S.E.)	6	1	1	0 11 6	0 10-Jan. 26, 1858.
256	South Caradon (copper), St. Cleer (S.E.)	34	345	355 365	500 00	0 50-Jan. 26, 1858.
128	South Crinns (copper), St. Austell	285	285	285	60 00	0 20-June 18, 1855.
3000	South Tolu (copper), Redruth, Cornwall	19	140	140 150	74 00	0 30-July 26, 1857.
496	South Wheal Frances, Illogan (S.E.)	181. 18s. 9d.	190	210 215	282 50	0 70-Jan. 4, 1858.
124	Spearhead Consols (tin), St. Just, Cornwall	32. 12s.	2	1 1/2	8 6 6	0 20-Dec. 10, 1853.
200	Spearhead Moor (copper), St. Just	231. 7s. 8d.	15	5	4 50	0 10-June 13, 1856.
570	St. Aubyn and Grylls (cop., tin), Breage	61. 8s. 4d.	5	4 1/2	0 17 6	0 70-Apr. 11, 1852.
24000	St. Day United (tin and copper)	7	1	1	2 5 6	0 20-Sept. 14, 1857.
4700	St. Ives Consols (tin), St. Ives	16	32	32	91 5 0	0 10-Nov. 13, 1857.
6000	Tamar Consols (all-lead), Beeralston (S.E.)	4	1	1 1/2	4 13 6	0 20-Feb. 7, 1856.
4000	Tinctor (copper, tin), Pool, Illogan (S.E.)	9	4	4 1/2	4 13 6	0 50-Apr. 13, 1857.
572	Trevelyan Consols (tin), St. Ives	13	14	14 16	1 15 0	0 10-Feb. 21, 1854.
96	Trevelyan (copper), Gwennap, Cornwall	43	65	55 65	467 15 0	0 50-June 4, 1855.
120	Trevelyan (copper), Gwennap, Cornwall	15	30	30	403 13 6	0 10-Apr. 29, 1851.
4000	Trevelyan (copper, tin), Bodmin	17. 3s. 6d.	1	1 1/2	0 50	0 50-July 8, 1856.
4096	Trevelyan (silver-lead), Menheniot, Cornwall	2	2	2	1 12 0	0 30-Apr. 3, 1857.
100	Trumpet Consols (tin), near Helston	95	50	50	55 00	0 50-Dec. 20, 1854.
400	United Mines (copper), Gwennap (S.E.)	40	115	110	61 5 0	0 20-Feb. 12, 1856.
30000	Valley of Towy (lead), Carmarthen (S.E.)	—	—	—	0 8 0	0 50-June 12, 1857.
512	Wendron Consols (tin), Wendron	231. 7s. 8d.	40	34 35	2 00	0 10-Sept. 22, 1857.
2560	West Bassett (copper), Illogan (S.E.)	1	35	35 34	12 18 0	0 50-Sept. 23, 1857.
256	West Caradon (copper), Liskeard (S.E.)	110	105 110	105 110	385 50	0 20-Sept. 23, 1857.
256	West Darnley (copper), Gwennap	410 7	80	80	33 1 9	0 10-July 5, 1857.
1024	West Providence (tin), St. Erth	11s. 7d.	2	2	33 1 9	0 10-Apr. 18, 1857.
400	West Wheal Seton (copper), Camborne	300	295 305	102 100	8 00	0 50-Dec. 15, 1857.
228	Wheal Arthur (copper), Calstock	8	6	6	6 10 0	0 10-Oct. 25, 1855.
340	Wheal Bai (tin), St. Just	6	5	5	2 00	0 10-Nov. 14, 1855.
512	Wheal Bassett (copper), Illogan (S.E.)	5	170	175 300	474 10 0	0 40-Dec. 4, 1857.
512	Wheal Buller (copper), Redruth (S.E.)	5	295	330 350	637 10 0	0 70-Jan. 19, 1858.
256	Wheal Clifford (copper), Gwennap	—	250	250 250	42 00	0 30-Oct. 26, 1857.
5000	Wheal Fortescue, Bodmin	50	—	—	2 4 0	0 10-Jan. 14, 1856.
1024	Wheal Friendship (copper), Devan	50	—	—	387 10 0	0 10-May 16, 1857.
1024	Wheal Glyn (copper, tin), Breage	4s.	17	17	0 20	0 20-Feb. 24, 1857.
512	Wheal Jane (silver-lead), Kes	3	17 1/2	15 17 1/2	8 10 0	0 10-Oct. 16, 1857.
5000	Wheal Kitty (tin), St. Agnes	4	4	4	0 6 0	0 30-Mar. 24, 1857.
1024	Wheal Kitty (tin), Ury Lelant (S.E.)	41 7 3	12	11 1/2 12	0 50	0 10-Sept. 17, 1857.
430	Wheal Lovell (tin), Wendron	33	18	18	31 00	0 10-Sept. 5, 1856.
448	Wheal Margaret (tin), Ury Lelant	19	52	57 60	84 0 0	0 20-Nov. 25, 1857.
1024	Wheal Mary Ann (lead), Menheniot (S.E.)	8	47	46 47	33 7 6	0 20-Dec. 15, 1857.
40	Wheal Owles, St. Just, Cornwall	70	30	30	40 10 0	0 50-Aug. 2, 1857.
128	Wheal Reeth (tin), Ury Lelant	31	20	20	40 10 0	0 50-Aug. 23, 1852.
1024	Wheal Seton (tin, copper), Camborne	107	150	125 135	286 10 0	0 20-Oct. 12, 1857.
1024	Wheal Trelawny (all-ld.), Liskeard (S.E.)	47	4	28 1/2	31 10 0	0 20-Jan. 26, 1857.
1024	Wheal Tremayne (tin, copper), Gwinnar	11	2	2	10 2 6	0 70-Jan. 11, 1854.
4096	Wheal Wrey (lead), St. Ives	16. 9s.	5	5 1/2 5 1/2	2 12 6	0 20-Dec. 23, 1857.
5000	Wicklow (copper), Wicklow	5	35	38 1/2	25 15 6	0 10-Jan. 14, 1858.

[Dividends paid every two months.] [Dividends paid every three months.]

FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
10000	Altan and Quenagen Un. (cop.), Norway	416	6	6	4 50	0 15 0-Nov. 21, 1855.
2464	Barras Burra (copper), South Australia	5	127 1/2	127 1/2	190 00	0 50-Dec. 2, 1857.
13000	Cobres Copper Company (cop.), Cuba (S.E.)	40	43	40 42	86 12 0	0 10-Jan. 26, 1858.
10000	Copago Mining Company, Chili (S.E.)	16	11	11 12	5 8 0	0 10-May 9, 1856.
30000	General Mining Assoc., Nova Scotia (S.E.)	20	15	16	10 50	0 15 0-July 7, 1857.
10000	Linares (lead), Pozo Ancho, Spain (S.E.)	3	8	8 1/2 9	5 2 2	0 50-Dec. 24, 1857.
10000	Lustanina (of Portugal) (S.E.)	1	1	1	0 6 0	0 20-May 25, 1857.
108815	Marikuta and New Granada (S.E.)	1	1	1	0 6 0	0 20-May 25, 1857.
35000	Peninsular Mining Company (Limited)	1	1	1	0 6 0	0 20-May 25, 1857.
10000	Pontigbau (silver-lead), France (S.E.)	20	5	4 1/2 5	1 0 0	0 20-Sept. 30, 1855.
7000	Royal Santiago (copper), Cuba (S.E.)	16	2	2 1/2 3	33 00	0 10-July 12, 1848.
21000	St. John del Rey	15	12 1/2	11 1/2 12 1/2	35 7 6	0 40-June 19, 1857.
43174	United Mexican (silver), Mexico (S.E.)	28 1/2	4	4 1/2 4 1/2	1 16 6	0 40-Feb. 14, 1858.
38678	North British Australian (S.E.)	1	—	—	0 2 8	0 10-June 20, 1857.

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
50000	Australian (S.E.)	7 1/2	—	—	—	—
50000	Chancellorville Freehold	1	—	—	—	—
50000	Clarendon Consols (S.E.)	—	—	—	—	—
53040	Cologne Mining Company	£1 4	—	—	—	—
500000	Copper Miners of Eng. (S.E.)	28	26 28	26 28	—	—
12000	Ditto, Pref. 7 1/2 per cent. (S.E.)	25	27	27	—	—
25000	Fortuna	2	1	1 1/2 1	—	—
2509	Kinzighal Min. Ass., Germany	4	1	1	—	—
35000	Liberty, Virginia	1	—	—	—	—
40000	London and Virginia	17s.	—	—	—	—
50000	Mount Carbon (coal), Virginia	1	—	—	—	—
60000	New Granada (S.E.)	1	—	—	—	—
10000	New Grand Duchy of Baden	1	—	—	—	—
50000	Nouveau Monde (S.E.)	1	—	—	—	—
10000	Port Phillip	1	—	—	—	—
60000	Rosie and Canada Lead	1	—	—	—	—
47795	Strathbairn (Limited)	1	—	—	—	—
7820	Ditto, Preference, 10 per cent.	1	—	—	—	—
35425	Wheal Jamaica (copper)	17s.	17s.	17s.	—	—
75000	Wildberg (all-lead, copper)	2	1	1	—	—